Strait of Georgia Recreational Fishery Statistics for Salmon and Groundfish, 2010

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by

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ABSTRACT

Zetterberg, P.R., Watson, N.M., and O'Brien, D.S. 2012. Strait of Georgia recreational fishery statistics for salmon and groundfish, 2010. Can. Manuscr. Rep. Fish. Aquat. Sci. 3000: xii + 106 p.

Recreational fisheries in the Strait of Georgia have been monitored since the 1960's and since 1980 the subject of an intensive creel survey. Annual reports of the results of this monitoring program are produced. This report documents recreational catch and effort estimates from the Strait of Georgia creel survey in 2010 and compares these to data from 2005 to 2009 to determine recent trends in catch and effort.

The 2010 Strait of Georgia creel survey estimates were derived from 5,289 fishing interviews and 65 aerial surveys. In addition to the creel survey, data were also collected through a recreational fishery logbook program and the resulting data are also presented in this report. The logbook data are treated as a census of catch obtained during logged trips, and are analysed with creel data to ensure that logged trips are not double counted in the creel survey estimates.

For the entire survey year (March through October) anglers conducted an estimated 92,547 boat trips and kept 23,404 chinook, 3,484 coho, 51,608 sockeye, 3,277 pink, 920 chum salmon, as well as 4,943 halibut, 3,204 lingcod, and 9,161 rockfish. The Comparative (May to September) effort decreased by 17.8% from 106,435 boat trips in 2009 to 87,443 in 2010 and was 6.4% below the five-year average of 93,450 trips. Total salmon retained catch decreased by 35.9% from 126,233 in 2009 to 80,963 in 2010 mainly due to a decrease in abundance of Fraser River pinks but off-set by an abundance of Fraser River sockeye. Salmon retention in 2010 was 6.6% lower than the 2005-2009 average of 86,653. Based on these estimates, the kept catch per boat trip (CPUE) across all salmon species during the entire survey period in 2010 was 0.89.

A total of 1,120 chinook and 150 coho salmon were examined for adipose fin clips by creel survey staff. Of these, 31.1% of chinook and 86.7% of coho had adipose fin clips. Scale samples were also collected from retained chinook and the results consisted of 0.7% age 2 fish, 54.1% age 3 fish, 40.8% age 4, 3.9% age 5 fish, and 0.5% age 6 fish.

RÉSUMÉ

Zetterberg, P.R., Watson, N.M., and O'Brien, D.S. 2012. Strait of Georgia recreational fishery statistics for salmon and groundfish, 2010. Can. Manuscr. Rep. Fish. Aquat. Sci. 3000: xii + 106 p.

La pêche récréative dans le détroit de Georgie est surveillée depuis les années 1960 et fait l'objet d'une méthode d'enquête intensive par interrogation des pêcheurs depuis 1980. On prépare des rapports annuels des résultats de ce programme de surveillance. Dans ce rapport, on consigne les estimations des captures et de l'effort de la pêche récréative tirées de l'enquête par interrogation des pêcheurs portant sur le détroit de Georgie qui a été réalisée en 2010, et on compare ces données à celles obtenues de 2005 à 2009 afin de relever les tendances récentes sur le plan des captures et de l'effort.

Les estimations de l'enquête par interrogation des pêcheurs portant sur le détroit de Georgie réalisée en 2010 sont tirées de 5 289 entrevues de pêcheurs et de 65 relevés aériens. En plus de cette enquête, des données ont également été recueillies dans le cadre d'un programme consistant à tenir un journal de bord de la pêche récréative, lesquelles sont également présentées dans ce rapport. On traite les données tirées de ce journal comme un recensement du nombre de captures relevées pendant les sorties consignées et on compare ces données à celles de l'enquête afin de s'assurer que les sorties ne sont pas comptées en double dans les estimations de l'enquête par interrogation des pêcheurs.

Pour la totalité de l'année visée par l'enquête, soit de mars à octobre, les pêcheurs ont réalisé environ 92 547 sorties, et ils ont conservé 23 404 saumons quinnat, 3 484 saumons coho, 51 608 saumons rouges, 3 277 saumons roses, 920 saumons kéta, ainsi que 4 943 flétans, 3 204 morues-lingues et 9 161 sébastes. L'effort comparatif (de mai à septembre) a affiché une hausse de 17,8 % pour passer de 106 435 sorties en 2009 à 87 443 en 2010, et était de 6,4 % inférieur à la moyenne quinquennale, qui était de 93 450 sorties. Le nombre total de saumons non rejetés a diminué de 35,9 % pour passer de 126 233 en 2009 à 80 963 en 2010, une baisse en grande partie attribuable à une diminution de l'abondance du saumon rose dans le fleuve Fraser, mais compensée par l'abondance du saumon rouge dans le fleuve Fraser. Le nombre de saumons non rejetés en 2010 a été de 6,6 % inférieur à la moyenne dégagée de 2005 à 2009, qui était de 86 653. À la lumière de ces estimations, le nombre de saumons non rejetés par sortie (captures par unité d'effort), pour l'ensemble des saumons en 2010, a été de 0,89.

Au total, le personnel responsable de l'enquête par interrogation des pêcheurs a examiné 1 120 saumons quinnat et 150 saumons coho à la recherche de coupures de la nageoire adipeuse. De ce nombre, 31,1 % des saumons quinnat et 86,7 % des saumons coho présentaient ce genre de coupures. On a également prélevé des échantillons d'écailles sur les saumons quinnat. Les résultats sont les suivants : 0,7 % étaient des poissons de 2 ans, 54,1 % des poissons de 3 ans, 40,8 % des poissons de 4 ans, 3,9 % des poissons de 5 ans, et 0,5 % des poissons de 6 ans.

INTRODUCTION

This report documents 2010 catch and effort statistics with comparisons to the 2005 to 2009 survey results for the Strait of Georgia (SG) tidal recreational fishery creel survey and presents the methodology for collecting these data. Data are presented in tables and figures with catch and effort dating back to 1986. Catch and effort tables are displayed by month, creel area and species. For comparison purposes and unless otherwise specified, the annual data presented are from the period May through September only.

In addition to creel survey data, in 2010 we included log data from the voluntary logbook program. Logbooks were distributed by the Sport Fishing Institute of British Columbia (SFI), Fisheries & Oceans Canada (DFO), and a representative of the Sport Fishing Advisory Board (SFAB) in Victoria for completion by selected fishers and log data have been included in this year's report providing a more complete picture of the recreational fishery.

The 2010 report is one of a series documenting the activities of the creel survey and providing official SG tidal recreational fishery catch statistics. All official recreational fishery catch estimates are now also stored in a database maintained by DFO South Coast regional staff. Please contact the lead author for more details. A list of previous reports in this series may be found in Appendix A.

BACKGROUND

Historically, the SG fishery supported what was one of the most valuable recreational fisheries in British Columbia. The 2010 coded-wire tag (CWT) recoveries indicated chinook catches consisted primarily of Fraser River, East Coast Vancouver Island, and Puget Sound salmon stocks. In 2010, over 34.5 million sockeye returned to the Fraser River compared with less than 2 million returns in 2009 (DFO 2011a). An assessment of approximately 60 years of escapement and catch data for all Pacific five salmon species from the north and central coasts indicate that pink salmon are doing relatively well but coho and chinook are doing relatively poorly (DFO 2011b). Salmon survivals appear to be strongly influenced by conditions in their early marine life and ocean survival and growth tends to be best when La Niña conditions and cool ocean waters are present in the first months that juveniles enter the ocean (DFO 2011b). Various First Nation, commercial, and recreational groups on both sides of the Canada/U.S. border depend on these stocks.

The SG creel survey study area comprises over 5,900 km^2 of ocean and has in excess of 2,400 km of shoreline. From its southern end near Victoria, the strait extends about 290 km northwest past Campbell River and at its greatest width is about 32 km wide. Two major population centres, Vancouver and Victoria, and many smaller centres such as Nanaimo and Campbell River are located within the study area. Over 500 boat

launch ramps, marinas and public wharves as well as thousands of private boat launching facilities provide ocean access (Figure 1).

Creel surveys in Juan de Fuca Strait (JDF) are administered by different staff within the South Coast Regional office: DFO Strait of Georgia Stock Assessment Group (to Sheringham Pt.) and DFO West Coast Vancouver Island Group (Sheringham Pt. west). Creel area 20(SG) refers to the area east of Sheringham Pt. to Albert Head. Similarly, the Johnstone Strait area which is comprised of creel areas 11, 12, and 13 are surveyed by two groups within South Coast Regional office; DFO Strait of Georgia Group and DFO Northern Vancouver Island Group. The SG group provides estimates for area 13 only.

The recreational fishery is active throughout the year but over 85% of the effort occurs in the summer months of May to September (Collicutt and Shardlow 1993). The most sought after species in the SG recreational fishery are chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*) salmon, but in recent years significant fisheries directed at pink (*O. gorbuscha*), sockeye (*O. nerka*), rockfish (*Sebastes* spp.) and particularly halibut (*Hippoglossus stenolepis*) have developed in certain areas.

The recreational fishery remains the primary harvester of chinook and coho in the SG. Effort in this fishery has fluctuated from 189,150 boat trips in 1960 to peaks of 562,113 in 1984 and 561,495 in 1988. The all time low of 77,028 boat trips was seen in 2008.

Creel survey data are used for a variety of management and reporting purposes within DFO. In addition, creel survey information is used to predict the effects of regulation changes and to measure success of management actions. The adipose clip information collected during the survey is provided to the Mark Recovery Program and it is used in combination with other data for exploitation rate, marine survival and stock distribution analyses (Kuhn *et al.* 1988).

OBJECTIVES

The specific objectives of the 2010 Strait of Georgia tidal creel survey were:

1. To estimate the recreational angler effort, total catch and catch rate (both releases and retention) of chinook, coho, chum (*O. keta*), pink, and sockeye salmon, halibut, lingcod (*Ophiodon elongatus*), rockfish and other finfish by month for creel area 13 through 20(SG), 28, and 29.

2. To estimate the catch rate of adipose-clipped chinook and coho in the recreational fishery.

3. To estimate the age composition and mean length-at-age for chinook, and length frequency for chinook and coho retained in the recreational fishery.

METHODS

STUDY DESIGN

The design of the SG tidal creel survey conducted in 2010 was similar to that used in the survey since its inception (DPA Consulting Ltd.1982) with modifications to data analyses, sampling intensity, flight routes and data processing. It is comprised of two independent surveys: angler interviews and aerial surveys. Angler interviews provide data on recreational fishing catch per unit effort (CPUE) and daily activity patterns. Aerial surveys provide estimates of total recreational fishing effort in the study area at the time of the aerial survey. These data are combined to provide monthly estimates of total recreational fishing effort and total catch of salmon, groundfish and other finfish in the recreational fishery using the analytical methods described by English *et al.* (2002).

The fishery was stratified according to the following criteria:

1. Month. The survey operated from 01 May to 30 September for the entire SG, creel areas 19 and 20(SG) were surveyed from 01 March to 30 September, and creel area 13 was surveyed from 01 May to 31 October in 2010.

2. Geographic area. Catch and effort estimates were produced at the creel sub-area level and summarized by creel area. These creel sub-areas are defined by Shardlow (1985) and plotted in Figures 3a and 3b. In reports prior to 2006, these were simply called 'Statistical Areas' which was changed to Pacific Fishery Management Areas (PFMA) starting with the 2002-2006 data report, Zetterberg *et al.* (2009). PFMA boundaries are legally defined and differ from the creel areas. In this report we have used creel area to ensure that there is no ambiguity as to the spatial stratification used. A detailed description of the survey area is contained in Appendix B.

3. Day type. Weekend and mid-week days were considered independently because recreational fishing effort is known to differ strongly between these day-types. Statutory Holidays were treated as weekend day-type.

4. Time of day. Sampling shifts were conducted during set time periods. A sampling shift is defined as a consecutive time period of interviewing anglers by one creel surveyor. The timing of sampling shifts varied during the year to account for varying fishing effort due to changes in sunrise and sunset timing. From April to August sampling shifts occurred during one of three time periods within a day: early (0800 to 1500 hours), mid-day (1100 to 1800 hours) or late (1400 to 2100 hours). The timing of early and late shifts changed in both September and October (September: early 0900 to 1600 hours; late 1300 to 2000 hours – October: early 0900 to 1600 hours; late 1200 to 1900 hours). Due to shorter daylight hours during winter, only single sampling shifts occurred in March (1100 to 1800).

Specific landing sites were chosen as locations for sampling shifts. Site selection was based on four criteria: representativeness, traffic volume, site accessibility and adequate observation points. Discussions with local fishers, marina operators, Fishery Officers, and long term creel survey staff, along with data from previous surveys were used to choose sites that were representative of local recreational fishing activity. Sites with expected traffic volumes of more than 15 boats per day in the summer were considered as possible sampling locations. Expected traffic volumes for sites were compiled from previous surveys or from discussions with marina operators or local Fishery Officers. Site accessibility refers to whether an interviewer can easily reach a site by car during the defined shift hours. Only sites with good accessibility were selected. As a result, landing sites on any of the islands in the SG were excluded from the survey. The final criterion, adequate observation points, was essential for interviewers to obtain an accurate count of all boats returning to a landing site.

Selected access sites were grouped into one of five survey zones (Victoria, Cowichan – Nanaimo, Campbell River, Sunshine Coast and Vancouver). These zones delineated areas within which local survey staff was hired. To reduce travel costs, survey staff conducted shifts only at sites within their survey zone.

Within each month and survey zone, each site was randomly allocated between one and 13 sampling shifts. These sampling shifts were divided equally among weekend and mid-week days and early, mid, and late daily time periods. The higher sampling effort on weekend days allows for a higher proportion of angling trips to be sampled (interviewed).

In 2010, interviews were conducted at 34 designated landing sites (boat ramps, marinas, or resorts; Figure 1) representative of the recreational fishing activity in the survey area at a particular time. The survey effort at specific access sites was optimized prior to the 2010 season based on an analysis by O'Brien and Carter (2009).

In 2010 marine recreational logbooks were distributed for completion by selected anglers. The purpose of these volunteer logbooks was to focus in areas with less accessible landing sites where creel data are more difficult to acquire. Fishers frequenting these areas were generally agreeable to be part of the program.

DFO coordinated data collection, data entry, and conducted estimation of catch and effort statistics. Catch and effort estimates are generated by creel sub-area but data are summarized and reported at the creel area level.

DATA COLLECTION

Angler interviews

Surveyors were stationed at boat ramps or marinas for sampling shifts to interview anglers as they returned from fishing. The numbers of boats returning to a site

during a sampling shift as well as number of interviews attempted and completed were recorded on a tally sheet. For each boating party landing after recreational fishing, the following information was recorded on the interview form (Figure 2):

1. Total number of licensed anglers in the boat.
2. Time of landing.
3. Whether the trip included services of an angling guide.
4. Time of departure and length of trip.
5. Total time during which fishing lines were in the water.
6. Average number of fishing lines or traps in the water.
7. Catch Summary: -Species and total number of kept and released fish for each creel sub-area fished (data sheets include the possibility of three sub-areas being fished during a single trip).
   -Number of hours spent fishing, type of fishing conducted (gear) and primary fishing location in each creel sub-area.
8. Adipose fin-clip status for chinook and coho.
9. Number of hours directed at each species.
10. Seal or sea lion encounter information.

Interviewers who are trained in fish identification inspected retained catch of each boating party willing to participate in the survey. Landed chinook and coho were checked for a missing adipose fin, which indicates that fish may be of hatchery origin and possibly the presence of a CWT (Kuhn *et al.* 1988). The interviewer informed anglers about the head recovery program and submission of heads when retaining an adipose clipped chinook or coho. In addition, chinook scale samples were collected for age determination and measurements of fork length, when possible, where chinook and coho were inspected. Chinook were also sampled for DNA.

Groundfish species were also biologically sampled. Retained lingcod (*Ophiodon elongates*) were measured (fork length), sex was determined and a portion of the dorsal fin was removed and placed in a labelled envelope for use in age determination (McFarlane and King, 2001; MacLellan, 2004). Other species including rockfish and halibut were identified to species and measured (fork length).

In 2010, SG creel surveyors continued electronically entering their data into the Catch and Release Estimation Survey Tool (CREST) system, a South Coast database and analysis tool for recreational data. This electronic entry system has been operational since 2008 and greatly facilitates rapid estimate generation. DFO provided laptop computers to each surveyor to facilitate field data entry.

Logbooks

In 2010, logbooks were distributed by the SFI as a pilot program in the Campbell River area, by a SFAB member in the Victoria/Sooke area, and by DFO in the Nanaimo and lower Sunshine Coast areas. Logbooks were returned to DFO at the end of the fishing season and data were entered into CREST and verified.

Effort counts

Effort, as individual boats actively fishing, is counted via aerial surveys of the study area. The study area is divided into approximately equal northern and southern sections for purposes of aerial effort counts (Figure 3a and b). Seaplane charter companies in Victoria and Courtenay (Pat Bay Air and Island Air, respectively) provided aircraft for this purpose. Aerial surveys travelled along the pre-defined routes and a single on-board observer counted all boats actively engaged in recreational fishing activity, using standard methods (Nagtegaal *et al.* 2009).

Flight paths and times of departure were designed to cover major concentrations of recreational fishing activity at peak periods and the number of aerial surveys each month was governed by budget. There were between six and ten flights per month depending on the time of year, with the highest number of flights occurring during the peak period in July and August. Planes flew at an altitude of 150-300 m (500-1000 feet) to facilitate a broad range of vision and still allow easy identification of vessel type. Aerial surveys conducted between May and September range between 3 to 4.5 hours covering a flight path of 600 to 670 km at speeds of 145 to 220 kph. During the March to April period in creel areas 19 and 20(SG), flights were 1.5 hours covering a 200 km route (Figure 3c). Days for aerial surveys during a month were randomly selected for each day type (weekday and weekend). Flight paths are reviewed annually and adjustments are made based on interview results indicating fishing activity outside of the current path.

DATA ANALYSIS

Data analysis of the results from the tidal creel survey program in 2010 included calculation of catch and effort statistics, calculation of variance of total fishing effort and catch, estimating the proportion of marked (CWT) chinook and coho salmon, and estimation of age and length composition of retained chinook. Established analysis methods are detailed by English *et al.* (2002). The estimates in this report are a summary of those maintained in the CREST database.

Along with data from the 2010 creel survey program, recreational log information from guided and un-guided participants within the SG area was also collected. Logbook data are entered into CREST, and logged catch for areas and times consistent with the 2010 SG creel survey program are presented here. The logbook data are treated as a census of catch obtained during logged trips, and are analysed with creel data to ensure that logged trips are not double counted in the overall catch estimates.

RESULTS AND DISCUSSION

DISTRIBUTION OF SAMPLING EFFORT

A total of 5,289 interviews with finfishing anglers at 34 landing sites, and 65 aerial surveys were conducted in 2010 (Table 1). Monthly distribution of interviews generally reflected monthly distribution of fishing effort (number of boat trips; Figure 4). While the survey goal is to attain interviews from 10% of fishing effort, total interviews in 2010 represent 5.7% of estimated total fishing effort for the entire study area (92,547 full year boat trips; Table 5). Interview coverage for the SG survey from May to September in 2010 ranged from a low of 0.8% in creel area 15 to a high of 31.2% in creel area 20(SG) (Table 1) based on the total estimated effort.

All 2010 SG recreational catch and effort statistics are summarised for key species by month and creel area. Fishing effort and catch statistics by key species are presented for each combination of month and creel area (Appendices C-1 to C-4, and C-9 to C-21).

Anglers made 87,443 boat trips during 2010 (May to September); this is a 17.8% decrease in effort from 106,435 trips completed in 2009 and 6.4% below the five-year average of 93,450 trips (Table 3). Angler effort has varied over the previous five years from a high of 106,435 boat trips in 2009 to a low of 77,028 in 2008 (Figure 5). Fishing effort followed the same general seasonal pattern as seen in previous years where effort levels climbed steadily from April, peaked in August and declined in September and October (Figure 6). During the May to September period, creel areas 20(SG) (28.8%), 13 (19.3%), 19 (9.9%), and 17 (9.7%) showed the highest effort expended in 2010 (Appendix C-1).

Ninety logbooks were distributed to 81 fishers in the Campbell River, Nanaimo, Victoria, and the lower Sunshine Coast areas and 69 (76.7%) of these were returned with data. Table 2 lists the number of logged boat trips received by DFO in 2010.

RECREATIONAL CATCH

Finfish retained in the SG recreational fishery for the May to September period in 2010 were estimated at 108,119 pieces and consisted of 74.9% (80,963) salmon (Table 5 and 6), 16.7% (18,011) groundfish, and 8.5% (9,145) rockfish (Table 11 and 13). Anglers also released an estimated 127,820 finfish pieces which consisted of 25.8% (32,965) salmon (Table 7 and 8), 54.4% (69,476) groundfish, and 19.9% (25,379) rockfish (Table 12 and 14) for this same period. There were also ten pieces released that were classified as 'unidentified' in general. Comparisons of CPUE between salmon and groundfish are summarized by month and creel area in Appendices D-3 and D-7 for the creel survey and Appendices D-4 and D-8 for log data.

Chinook, pink, and chum salmon retention was open all year in the SG survey area in 2010. Due to early timed Fraser River chinook concerns, restrictions were initiated at the beginning of March until late July in the southern portion of the SG survey area. Coho retention was allowed from June to the end of December with two (2) hatchery fish per day being the most common retention regulation. Retention of sockeye in the SG survey area was allowed from early August till the end of December. Most groundfish species were open all year in the SG survey area in 2010. Halibut retention was open from February to mid October. Lingcod and rockfish were open concurrently from May to the end of September. For further details on the regulations which affected the 2010 SG recreational fishery (for major finfish species) see Appendix G.

Salmon

Recreational salmon retention for the SG in 2010 totalled 80,963 pieces for May to September (Table 4) and 82,703 for the entire survey year (Tables 5 and 6). For the May to September period, retained catch consisted of 27.8% chinook, 4.3% coho, 63.7% sockeye, 4.0% pink, 0.2% chum, and 0.01% unidentified salmon. Salmon retention in 2010 was 6.6% lower than the 2005-2009 average of 86,653. Comparative salmon released and total salmon intercepted for 2010 is listed in Table 4.

In 2010, the highest effort expended was observed in creel areas 20(SG) (28.6%), 13 (19.3%), and 19 (12.4%) with a total salmon kept CPUE of 0.74, 1.54, and 0.10, respectively (Figure 15, Appendix D-7). The CPUE for all salmon kept by creel area for log data are presented in Appendix D-8. Due to low or no sample sizes in creel areas 17 (n=2), 19 (n=1), and 20(SG) (n=0), the listed log CPUE may not be representative. Most of the logbooks for the Victoria area were not received in time to incorporate into the estimate process. The highest fishing effort was seen during the May to September period in 2010 with the highest total salmon kept CPUE of 1.74 observed during August (Appendix D-3). CPUE in 2010 for salmon in general is listed by month in Appendices D-3 for the creel survey, D-4 for log data, and by creel area in D-7 for the creel survey and D-8 for log data.

Chinook

In 2010, chinook salmon retention was 22,471 pieces (five-year average = 27,619) during the May to September period (Table 3, Figure 5). Within the previous five years, retention ranged from 17,936 in 2008 to 37,460 in 2009. Monthly chinook retained increased steadily through May and June and peaked in August at 7,130 pieces (Table 5, Figure 7). For the entire survey period, creel area 13 recorded 38.3% of the total estimated catch, followed by creel area 20(SG) (31.7%), 14 (10.5%), and 17 (9.3 %) (Table 6, Figure 9, Appendix C-2).

Retained legal and sub-legal chinook is summarized in Table 9 by month and Table 10 by creel area for 2010. Appendix F summarizes the number of retained chinook annually from 1960 to 1985.

Chinook salmon releases for 2010 was 16,871 pieces (five-year average = 23,766) during the May to September period (Table 3). Monthly chinook released followed the same general pattern as those retained (Table 5, Figure 7). Released legal and sub-legal chinook is summarized in Table 9 by month and Table 10 by creel area for 2010. Table 3 summarizes the number of released chinook annually from 2010 back to 1989.

Seasonal (May to September) average CPUE (kept catch per boat trip) for chinook has remained fairly constant over the past five years with 2008 having the lowest (0.23) and 2009 having the highest (0.35). In 2010, chinook CPUE for retained catches had an average of 0.26 compared to the 2005 to 2009 average CPUE of 0.30 (Figure 8). For the entire survey period, creel area 13 recorded the highest CPUE at 0.50 followed by creel areas 14 (0.33), 20 (0.28), and 17 (0.26). Chinook CPUE is separated out for the creel survey in Appendix D-1 by month and D-5 by creel area, and for logged records in D-2 by month and D-6 by creel area. Due to low or no sample sizes in creel areas 17 (n=2), 19 (n=1), and 20(SG) (n=0), the listed log CPUE may not be representative. Most of the logbooks for the Victoria area were not received in time to incorporate into the estimate process.

Chinook retention improved in the early 2000's but declined from 2003 to 2006. Retention increased slightly from 2006 to 2007 and saw its lowest level in 2008 since 1960 (Table 3, Figure 5 and Appendix F respectively). Chinook CPUE decreased in 2010 relative to 2009 (0.26/boat trip vs 0.35/boat trip, respectively), likely resulting in the observed 17.8% decrease in effort in 2010 relative to 2009. Chinook retention decreased by 40.0% from 37,460 in 2009 to 22,471 in 2010. Spatial distribution of chinook retained in 2010 did not follow a similar pattern to previous years (higher catches in southern SG) as catch was fairly evenly distributed between northern and southern SG.

Coho

Coho salmon retention in 2010 (May to September period) was 3,452 pieces (five-year average = 4,077) which was 57.8% lower than 2009 (8,182; Table 3, Figure 10 and 11). Retained catch peaked in August at 1,125 pieces (Table 5). For the entire survey period, creel area 20(SG) and 13 both recorded 27.5% of the total estimated catch, followed by creel area 28 (25.2%; Table 6, Figure 9).

Coho salmon releases for 2010 were 10,570 pieces (five-year average = 17,073) during the May to September period. Releases in 2010 were 69.4% lower than 2009 (34,516). Table 3 summarizes the number of released coho annually from 1998 to 2010.

In 2010, coho CPUE averaged 0.04 for the May to September period (five-year average = 0.04; Appendix D-1, Figure 11). For the entire survey period, creel area 28

recorded the highest CPUE at 0.18 followed by creel area 13 (0.05; Appendix D-5). Coho kept and released CPUE is separated out for the creel survey in Appendix D-1 by month and D-5 by creel area, and for logged records in D-2 by month and D-6 by creel area.

Coho retention has fluctuated widely, even within the 2000's. From a comparative high of 947,481 pieces in 1988 it continued to decline over time. The 1999 estimate of coho retained was an all time low of 310 pieces due to a majority of areas being closed to their retention. Coho catch numbers began to improve in the early 2000's as stocks showed some recovery as well as the advent of mark selective (adipose-clipped only) fisheries in selected areas on hatchery stocks. Since 2005, retained catch dropped again as restrictions on coho were reintroduced but 2009 saw levels not seen since 2004. Appendix F summarizes retention of coho from 1960 to 1985.

Sockeye, pink, and chum

The recreational fishery for sockeye in the SG in 2010 occurred from early August till it closed in the end of December. Sockeye retention in 2010 was at levels not seen since we started recorded the catch in 1985 mainly due to an unusual abundance of Late run Fraser River stocks. The diversion rate was estimated at ~ 72% through Johnstone Strait which resulted in slightly higher catches in creel area 13 versus 20(SG) (DFO 2011a). There were 51,608 pieces retained for the May to September period (five-year average =7,443) (Table 3). For the entire survey period, creel area 29 recorded 46.9% of the total estimated catch of sockeye followed by 13 (28.9%), and 20(SG) (20.8%; Table 6). Retained catch peaked in August with 42,422 pieces (Table 5).

Estimated sockeye releases during 2010 were 2,569 pieces (five-year average = 1,848) for the May to September period (Table 3). Releases are listed by month and by creel area in Tables 7 and 8 respectively. Estimates by month and creel area are listed in Appendices C-9 and C-10. A comparison of retained sockeye in 2010 is displayed with the five year average in Figure 12.

Pink salmon retention was 3,277 pieces (five-year even cycle average = 6,018) for the May to September period in 2010 (Table 3). A comparison between the 2010 and the five-year average of even-year pink are presented in Figure 13. Retained catch peaked in September with 1,276 pieces (Table 5). For the entire survey period, creel area 13 recorded 37.8% of the total estimated catch of pink salmon followed by creel areas 29 (37.0%), and 20(SG) (10.5%; Table 6). A comparison of retained pink in 2010 is displayed with the five-cycle average in Figure 13.

Estimated pink salmon releases for 2010 were 733 pieces for the May to September period (five-year even cycle average = 1,231) (Table 3). Pink releases for the entire survey period were highest in creel area 17 (43.7%) followed by 14 (28.8%) and 18 (15.2%; Table 8). Releases by month are presented in Table 7.

Chum salmon retention was 145 pieces (five-year average = 1,642) during the May to September period (Tables 3 and 5). Retained catch peaked during October at 775 pieces and 97.7% were taken in creel area 13 and 2.3% in creel area 20(SG) (Tables 5 and 6). A comparison of retained chum in 2010 is displayed with the five year average in Figure 14. Releases are presented in Table 7 by month and Table 8 by creel area

CPUE for sockeye, pink, and chum is listed in Appendix D-1 by month for the creel survey, D-2 for log data, and by creel area in D-5 for the creel survey and D-6 for log data.

Groundfish

Recreational groundfish retention for the SG in 2010 totalled 27,156 pieces for May to September (25.1% of overall catch) and 28,367 for the entire survey period (Tables 11 and 13). For the May to September period, retained catch consisted of 14.6% halibut, 11.8% lingcod, 33.7% rockfish, and 39.9% other groundfish.

More accurate species identification has allowed catch estimates for most groundfish species, including rockfish. Previous reports (Hardie *et al.* 2003) have identified only three species of groundfish and nine species of rockfish; however, beginning in 2007 an additional nine species of groundfish were identified by creel surveyors. Lingcod and spiny dogfish (*Squalus acanthias*) catches have been recorded the longest and halibut recording began in 1998. Since 2000, all species of groundfish intercepted in the survey (i.e. retained catch that is observed by a creel surveyor) have had an estimate generated. A taxonomic reference of all species reported in 2010 is presented in Appendix E.

Groundfish retained for the May to September period in 2010 (27,156) decreased 23.3% from 2009 (35,392). Rockfish comprised the largest proportion of this catch in 2010 at 9,145 (33.7%) pieces along with halibut at 3,966 (14.6%) pieces, rock sole (*Lepidopsetta bilineata*) at 3,923 (14.4%) pieces, greenling (*Hexagrammidae spp.*) at 3,639 (13.4%), and lingcod at 3,197 (11.8%) pieces. From May to September, halibut and lingcod retentions have increased relative to five-year averages by 119.4% (five-year average = 1,808) and 10.1% (five-year average = 2,903), respectively. Rockfish retention increased by about 19.7% from the five-year average of 7,640 (Figure 16).

The 2010 catch of groundfish species was not evenly distributed across the study area. Retained rockfish was highest in creel areas 20(SG), 16, 17, and 19 with 27.2%, 16.7%, 15.5%, and 12.4% of the total catch, respectively (Table 13). Lingcod retention was highest in creel area 17 (31.2%), followed by creel areas 20(SG) (17.7%), 16 (13.1%), and 19 (11.3%; Table 13). Halibut retained was highest in creel areas 19 (74.9%), 20(SG) (22.7%), and 13 (1.3%; Table 13). Table 15 provides a summary of groundfish kept for the entire survey period by major catch areas. Tables 12 and 14 provide summaries of groundfish releases by month and creel area respectively. A breakdown of lingcod releases, by legal versus sub-legal size categories, is provided in Appendices C-20 and C-21 respectively.

Since 2001, nine species of rockfish have been identified throughout the survey. In 2009, kept and release estimates were grouped into two categories; group 1 and group 2. Rockfish group 1 consists of any catch for china (*Sebastes nebulosus*), copper (*S. caurinus*), quillback (*S. maliger*), tiger (*S. nigrocinctus*), and yelloweye (*S. ruberrimus*) and group 2 consists of any other rockfish species, including those that were unidentified. Only two species, copper and quillback, showed considerable retention in the SG for 2010 (Table 16). Tables 11 and 12 provide rockfish catch summaries by month and Tables 13 and 14 by creel area. Figure 16 displays monthly estimated catches along with the five year average.

The estimated retained CPUE for groundfish varied through the creel survey period across species. Retained CPUE for rockfish ranged from a high of 0.17 in July to 0.01 in April and averaged 0.10 for the entire year (Figure 17; Appendix D-3). Kept and released CPUE for the creel survey is summarized by creel area (Appendix D-7) and by month (Appendix D-3) for both rockfish and groundfish in general. The CPUE for both groundfish and rockfish for log data are presented in Appendices D-4 and D-8 by month and creel area respectively. Kept CPUE for halibut during the creel survey ranged from 0.24 in April to 0.01 in August and averaged 0.05 for the year (Appendix D-1). Lingcod retained CPUE ranged from 0.07 in May and June to 0.02 in August and averaged 0.03 for the year (Appendix D-1). Released CPUE for the creel survey is presented by month and creel area in Appendix D-1 and D-5, respectively. The CPUE's for the log data used with the estimates in 2010 are displayed in Appendix D-2 by month and Appendix D-6 by creel area.

BIOLOGICAL DATA

Adipose-clipped chinook and coho

In 2010, for the entire survey period, 1,120 chinook (4.8% of total estimated catch; 97.6% of catch passing by creel observers) were examined for adipose fin clips. Of the chinook examined during the May to September period, 25.1% had clips. During this period, the observed percentage of chinook adipose-clips was 42.0% for Victoria region, 23.7% for South Gulf, and 5.8% for the North Gulf (Table 17). Chinook kept catch from May to September was 4,741 adipose-clipped, 17,405 unclipped, and 325 unknown for a total of 22,471 pieces (Appendix C-7). Of retained chinook with known mark status (for the entire survey period) 54.7% of adipose-clipped occurred in creel area 20(SG), 16.2% in 13, 10.3% in 19, and 7.8% in 17 (Appendix C-8). Unclipped chinook retention was 45.7% in creel area 13, 24.4% in 20(SG), 12.5% in 14, and 9.1% in 17 (Appendix C-8). Releases by marked, unmarked, and unknown status are also presented in Appendix C-7 by month and in Appendix C-8 by creel area.

For the entire survey period, 150 coho (4.3% of total catch; 100.0% of catch passing by creel observers) were examined for adipose fin clips. Among coho examined

for the May to September period, 86.4% had adipose clips. Regionally (for the same period), percentages of adipose clips were 74.5%, 97.8%, and 89.1% for Victoria, South Gulf, and North Gulf, respectively (Table 18). Coho kept catch from May to September was 3,035 adipose-clipped, 417 unclipped, and zero (0) unknown for a total of 3,452 pieces (Appendix C-5). Of coho with known mark status (for the entire survey period), 29.2% of adipose-clipped occurred in creel area 13, 28.7% in 28, 23.7% in 20(SG), and 10.1% in creel area 29 (Appendix C-6). Unclipped coho retention was 55.4% in creel area 20(SG), 22.0% in 14, 14.8% in 13, and 3.9% in 19 (Appendix C-6). Releases by marked, unmarked, and unknown status are also presented in Appendix C-5 by month and in Appendix C-6 by creel area.

In 2010, of the 1,239 heads returned to the Sport Head Recovery Program (SHRP) caught in the SG survey area, 278 adipose-clipped Chinook contained a CWT (22.4%). Fifty-one chinook heads were excluded from creel area 20(SG) as they were listed as caught in PFMA 20 in general and could be from catch areas outside our survey area. The number of CWT's recovered by stock are summarized in Table 19. Further information on the SHRP can be obtained from the web at <http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/tag-etiquette/SHRP-PRTS-eng.htm> (accessed 2012 Aug 17) or by calling 1-866-483-9994.

Catch-at-age for chinook

During 2010, 510 chinook were sampled for scales. All these scale samples were sent in to the aging lab at the Pacific Biological Station (PBS) to be aged resulting in 434 readable samples; 76 could not be aged due to regenerated scales or a lack of fresh water annuli. Table 20 lists the monthly number and percent age composition of readable chinook samples. All ages represent total age at year of life caught (including both freshwater and marine life stages – i.e. Gilbert-Rich age (Groot and Margolis 1991)). Age data are summarized graphically in Figure 18.

Monthly age proportions were applied to estimated monthly chinook catches kept to provide a breakdown by age group (Table 21). The 2010 chinook recreational kept catch in the SG consisted of 0.7% 2-year olds (5-year average = 5.9%), 54.1% 3-year olds (5-year average = 44.3%), 40.8% 4-year olds (5-year average = 42.5%), and 4.4% 5-year olds or greater (5-year average = 7.3%; Table 23).

Mean length-at-age for chinook and length for coho

In 2010, creel survey staff measured 2.6% of the total (n = 23,404) retained chinook during interviews for the entire survey period. The average fork length (FL) of measured chinook was 735 mm (n = 612; Figure 19). Length at age by month, where length and age samples were collected from the same individual fish, is presented in Table 22. The overall mean length of age 3 and 4 fish were 714 (n = 231) and 776 (n = 176) mm, respectively. The longest salmon sampled was a 1005 mm FL chinook landed

at Sunny Shores Marina in August caught in creel area 20(SG), but the scale age of this fish was inconclusive and resulted only in four marine annuli present.

Of all chinook measured for length by SG creel survey staff in 2010, 6 (1.0%) were smaller than the legal size limit (below 450 mm in creel areas 19 and 20(SG) and 620 mm in creel areas 13-18, 28, and 29). Of the 541 retained chinook that were measured from May to September in all areas, 3 (0.6%) were sub-legal. Historical rates of sub-legal sized retained chinook observed in the creel survey are presented in Table 24.

The average fork length of measured coho salmon was 567 mm in 2010 (n = 96; Figure 20). In total, 64.0% of coho observed during interviews (n = 150) were measured. The longest coho sampled was 780 mm FL landed at Sunny Shores Marina in September caught in creel area 20(SG).

SUMMARY

A tidal recreational fishery creel survey was conducted in the Strait of Georgia (SG) in 2010 to estimate the catch of all reported recreational finfish species and the total recreational fishing boat trips. Logbook data was also collected. In this report, data are presented by month and creel area.

For the entire creel survey period (May to September for the entire SG, creel areas 19 and 20(SG) were surveyed from March to September, and creel area 13 was surveyed to the end of October) recreational fishers made an estimated 92,547 boat trips. A total of 5,289 finfish boat trips (5.7%) were interviewed at 34 landing sites in the SG creel survey area. A total of 65 aerial surveys were used to count fishing effort.

Based on these data, recreational anglers retained an estimated 111,070 finfish pieces of which 74.5% were salmon and 25.5% were groundfish. The 82,703 landed salmon consisted of 23,404 (28.3%) chinook, 3,484 (4.2%) coho, 51,608 (62.4%) sockeye, 3,277 (4.0%) pink, 920 (1.1%) chum, and 10 unidentified salmon. The 28,367 landed groundfish consisted of 4,943 (17.4%) halibut, 3,204 (11.3%) lingcod, 9,161 (32.3%) rockfish, and 11,058 (39.0%) other groundfish. Anglers also released 131,823 finfish during the same period which consisted of 25.6% salmon and 74.4% groundfish. The 33,769 released salmon consisted of 17,556 (52.0%) chinook, 10,690 (31.7%) coho, 2,569 (7.6%) sockeye, 733 (2.2%) pink, zero chum, and 2,222 (6.6%) unidentified salmon. The 98,054 released groundfish consisted of 567 (0.6%) halibut, 40,673 (41.5%) lingcod, 25,849 (26.4%) rockfish, and 30,965 (31.6%) other groundfish.

Comparisons of the 2010 estimates are made to the previous five years of catch estimates to determine trends in catch, effort, and catch per unit effort. Based on biological samples from the creel survey, we estimate that 31.1% of kept chinook and 86.7% of kept coho were adipose fin-clipped. In addition, age composition and length frequency distributions of chinook are presented.

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TABLES

Table 1. Number of finfishing interviews by month and creel area and number of aerial surveys in the Strait of Georgia (SG) creel survey, 2010.

Month	Creel area										Monthly Total	Monthly Aerial Surveys[1]
	13	14	15	16	17	18	19	20(SG)	28	29		
Jan	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	6	269	106	-	-	381	11
Apr	-	-	-	-	-	4	173	73	-	-	250	6
May	30	49	1	10	118	20	163	135	7	24	557	6
Jun	95	56	0	15	121	55	195	187	11	13	748	8
Jul	124	113	23	53	104	37	187	302	51	26	1020	10
Aug	170	134	14	45	162	81	147	617	36	89	1495	9
Sep	92	97	6	17	61	34	112	229	29	54	731	8
Oct	107	-	-	-	-	-	-	-	-	-	107	7
Nov	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-
Total	618	449	44	140	566	237	1246	1649	134	206	5289	65

[1] Number of monthly aerial surveys is a summation of two separate flights enumerating the entire SG survey area as a whole.

Interviews showing in Area 18 outside the normal operating months are results of interviews conducted in Area 19 Sidney.

Table 2. Number of logged trips received by month and creel area in the SG, 2010.

Month	Creel area										Monthly Total
	13	14	15	16	17	18	19	20(SG)	28	29	
Jan	2	0	0	0	0	0	0	0	0	0	2
Feb	1	0	0	0	0	0	0	0	0	0	1
Mar	4	0	0	3	0	0	0	0	0	0	7
Apr	5	0	0	0	0	0	0	0	0	0	5
May	25	2	5	25	2	3	4	0	0	3	69
Jun	150	1	6	43	2	2	23	13	0	8	248
Jul	377	12	8	42	0	4	24	29	5	11	512
Aug	488	5	7	22	0	2	9	52	3	11	599
Sep	240	0	3	24	0	4	1	24	1	11	308
Oct	20	0	0	0	0	0	0	10	0	0	30
Nov	0	0	0	0	0	0	0	2	0	0	2
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	1312	20	29	159	4	15	61	130	9	44	1783

Table 3. Tidal effort (boat trips), kept, and released salmon catch estimates in the SG recreational fishery, 1986 to 2010[1].

Year	Effort	Kept					Released				
		Chinook	Coho	Sockeye	Pink	Chum	Chinook	Coho	Sockeye	Pink	Chum
1986	502334	146781	530345	873	3138	606	-	-	-	-	-
1987	506550	94351	602075	8491	89833	682	-	-	-	-	-
1988	561495	85370	947481	16271	8486	663	-	-	-	-	-
1989	515762	101365	447555	13345	122840	3329	170588	-	-	-	-
1990	477995	85967	581952	30606	11549	652	181348	-	-	-	-
1991	394285	98831	123571	23401	248971	888	150429	-	-	-	-
1992	397322	92725	505289	6745	19075	843	134651	-	-	-	-
1993	459112	109060	777072	23600	172713	1766	167960	-	-	-	-
1994	410939	61312	273624	14038	18453	289	133835	-	-	-	-
1995	294339	56829	72999	5897	183859	1481	107784	-	-	-	-
1996	280354	87856	127107	2365	7779	3469	176607	-	-	-	-
1997	249439	53730	98540	16819	111003	481	60794	-	-	-	-
1998	146931	18914	1833	4474	6848	3556	32506	20570	-	-	-
1999	150847	41500	310	491	26458	790	13043	6021	-	-	-
2000[2]	148070	27193	4296	6367	9762	1098	50755	34577	468	3710	41
2001[2]	179654	44314	13310	3252	118592	405	53182	121527	2083	37284	214
2002[2]	191141	66198	6357	5133	11950	597	58133	32689	3203	796	0
2003[2]	156670	34442	16226	2917	104556	910	24155	43653	377	25468	20
2004[2]	114262	36207	10410	3340	4527	8649	22307	35564	1438	834	1349
2005[2]	92117	27306	4789	6949	68479	4507	15199	21156	2619	23332	454
2006[2]	95153	26728	1766	29800	1594	2644	6853	4430	2034	301	11
2007[2]	96515	28665	4593	191	76560	416	32903	20302	2137	29485	0
2008[2]	77028	17936	1056	79	2256	508	9675	4961	228	515	0
2009[2]	106435	37460	8182	197	80194	137	54203	34516	2220	25305	8
2010[2]	87443	22471	3452	51608	3277	145	16871	10570	2569	733	0

[1]This table uses values from May to September inclusively for historical comparisons.

[2]Change in estimation methods (see English et al. 2002)

Table 4. Total effort, kept, and released catch estimates of all salmon in the SG recreational fishery, 1986 to 2010[1].

Year	Effort	Total Salmon Kept	Total Salmon Released	Total Kept and Released
1986	502334	681743	-	681743
1987	506550	795432	-	795432
1988	561495	1058271	-	1058271
1989	515762	688434	170588	859022
1990	477995	710726	181348	892074
1991	394285	495662	150429	646091
1992	397322	624677	134651	759328
1993	459112	1084211	167960	1252171
1994	410939	367716	133835	501551
1995	294339	321065	107784	428849
1996	280354	228576	176607	405183
1997	249439	280573	60794	341367
1998	146931	35625	53076	88701
1999	150847	69549	19064	88613
2000[2]	148070	48716	134328	183044
2001[2]	179654	180211	254234	434445
2002[2]	191141	90261	106884	197145
2003[2]	156670	159115	103273	262388
2004[2]	114262	63213	77670	140884
2005[2]	92117	112030	69080	181110
2006[2]	95153	62698	17054	79753
2007[2]	96515	110450	88168	198618
2008[2]	77028	21855	17392	39247
2009[2]	106435	126233	146928	273161
2010[2]	87443	80963	32965	113927

[1]This table uses values from May to September inclusively for historical comparisons.

[2]Change in estimation methods (see English et al. 2002)

Table 5. Salmon kept by month[1], effort, and species[2] in the SG, 2010.

Month	Type[3]	Effort	SE	Chin	SE	Coho	SE	Sock	SE	Pink	SE	Chum	SE	NO ID	SE	Total Monthly Kept	Total Monthly SE
Jan	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	Creel	1426	137	309	58	0	0	0	0	0	0	0	0	0	0	309	58
Apr	Creel	2728	435	624	165	0	0	0	0	0	0	0	0	0	0	624	165
May	Creel	6268	514	1227	169	18	19	0	0	0	0	0	0	0	0	1245	170
	Log	56	-	37	-	0	-	0	-	0	-	0	-	0	-	37	-
Jun	Creel	12564	780	3810	411	373	115	0	0	0	0	0	0	0	0	4184	427
	Log	242	-	267	-	32	-	0	-	0	-	0	-	0	-	299	-
Jul	Creel	22395	1193	6187	812	967	297	0	0	792	229	0	0	10	11	7956	895
	Log	545	-	782	-	13	-	0	-	0	-	0	-	0	-	795	-
Aug	Creel	29448	2616	6653	976	1096	246	42422	5591	1209	306	0	0	0	0	51382	5689
	Log	538	-	477	-	29	-	0	-	0	-	0	-	0	-	506	-
Sep	Creel	15103	1336	2924	423	895	256	9186	2158	1276	1272	145	70	0	0	14426	2554
	Log	285	-	106	-	28	-	0	-	0	-	0	-	0	-	134	-
Oct	Creel	929	216	0	0	30	18	0	0	0	0	775	215	0	0	805	216
	Log	20	-	1	-	2	-	0	-	0	-	0	-	0	-	3	-
Nov	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	All	92547	3343	23404	1421	3484	478	51608	5993	3277	1329	920	226	10	11	82703	6323

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Chin = chinook, Sock=sockeye and NO ID = unidentified salmon

[3]Log = logbook reported data incorporated into final estimate

Table 6. Salmon kept by creel area[1], effort, and species[2] in the SG, 2010.

Creel Area	Type[3]	Effort	SE	Chin	SE	Coho	SE	Sock	SE	Pink	SE	Chum	SE	NO ID	SE	Total Area Kept	Total Area SE
13	Creel	16434	936	7416	1135	861	257	14903	2399	1238	306	899	225	0	0	25317	2693
	Log	1414	-	1540	-	97	-	0	-	0	-	0	-	0	-	1637	-
14	Creel	7357	376	2424	261	318	70	156	61	308	197	0	0	0	0	3205	340
	Log	31	-	31	-	0	-	0	-	0	-	0	-	0	-	31	-
15	Creel	1128	108	130	43	0	0	0	0	0	0	0	0	0	0	130	43
	Log	25	-	41	-	5	-	0	-	0	-	0	-	0	-	46	-
16	Creel	3391	210	222	62	0	0	0	0	0	0	0	0	0	0	222	62
	Log	143	-	37	-	2	-	0	-	0	-	0	-	0	-	39	-
17	Creel	8451	444	2165	316	28	14	0	0	159	59	0	0	0	0	2351	322
	Log	2	-	2	-	0	-	0	-	0	-	0	-	0	-	2	-
18	Creel	2897	184	284	55	0	0	1021	247	0	0	0	0	0	0	1305	253
	Log	15	-	1	-	0	-	0	-	0	-	0	-	0	-	1	-
19	Creel	11491	663	1047	153	26	15	95	37	18	18	0	0	0	0	1185	159
	Log	1	-	2	-	0	-	0	-	0	-	0	-	0	-	2	-
20 (SG)	Creel	26493	2828	7421	700	958	201	10726	2258	344	103	21	23	10	11	19479	2375
	Log	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
28	Creel	4951	480	291	156	879	317	483	203	0	0	0	0	0	0	1653	408
	Log	9	-	3	-	0	-	0	-	0	-	0	-	0	-	3	-
29	Creel	8269	1099	336	126	310	125	24224	4995	1212	1272	0	0	0	0	26082	5158
	Log	46	-	13	-	0	-	0	-	0	-	0	-	0	-	13	-
Total	All	92547	3343	23404	1421	3484	478	51608	5993	3277	1329	920	226	10	11	82703	6323

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Chin = chinook, Sock=sockeye and NO ID = unidentified salmon

[3]Log = logbook reported data incorporated into final estimate

Table 7. Salmon released by month[1], effort, and species[2] in the SG, 2010.

Month	Type[3]	Effort	SE	Chin	SE	Coho	SE	Sock	SE	Pink	SE	Chum	SE	NO ID	SE	Total Monthly Rel[4]	Total Monthly SE
Jan	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	Creel	1426	137	119	34	0	0	0	0	0	0	0	0	0	0	119	34
Apr	Creel	2728	435	566	239	0	0	0	0	0	0	0	0	0	0	566	239
May	Creel	6268	514	830	142	59	51	0	0	0	0	0	0	7	5	897	151
	Log	56	-	7	-	0	-	0	-	0	-	0	-	0	-	7	-
Jun	Creel	12564	780	3709	503	1206	382	0	0	0	0	0	0	297	162	5213	652
	Log	242	-	44	-	60	-	0	-	0	-	0	-	0	-	104	-
Jul	Creel	22395	1193	3025	393	1884	347	129	68	35	23	0	0	356	246	5430	584
	Log	545	-	76	-	93	-	0	-	0	-	0	-	0	-	169	-
Aug	Creel	29448	2616	5608	641	3611	562	1715	872	586	209	0	0	922	327	12442	1280
	Log	538	-	129	-	222	-	0	-	0	-	0	-	0	-	351	-
Sep	Creel	15103	1336	3431	639	3176	586	724	482	111	109	0	0	639	277	8082	1036
	Log	285	-	12	-	258	-	0	-	0	-	0	-	0	-	270	-
Oct	Creel	929	216	0	0	104	42	0	0	0	0	0	0	0	0	104	42
	Log	20	-	0	-	16	-	0	-	0	-		-	0	-	16	-
Nov	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	All	92547	3343	17556	1143	10690	965	2569	999	733	237	0	0	2222	520	33769	1887

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Chin = chinook, Sock=sockeye and NO ID = unidentified salmon

[3]Log = logbook reported data incorporated into final estimate

[4]Rel = released

Table 8. Salmon released by creel area[1], effort, and species[2] for the SG, 2010.

Creel Area	Type[3]	Effort	SE	Chin	SE	Coho	SE	Sock	SE	Pink	SE	Chum	SE	NO ID	SE	Total Area Kept	Total Area SE
13	Creel	16434	936	3530	487	3788	642	142	76	0	0	0	0	0	0	7460	809
	Log	1414	-	234	-	640	-	0	-	0	-	0	-	0	-	874	-
14	Creel	7357	376	2725	344	1862	305	0	0	211	128	0	0	2	1	4800	477
	Log	31	-	5	-	4	-	0	-	0	-	0	-	0	-	9	-
15	Creel	1128	108	446	141	17	20	0	0	0	0	0	0	0	0	462	142
	Log	25	-	11	-	0	-	0	-	0	-	0	-	0	-	11	-
16	Creel	3391	210	626	237	74	44	0	0	0	0	0	0	62	42	761	244
	Log	143	-	4	-	3	-	0	-	0	-	0	-	0	-	7	-
17	Creel	8451	444	5146	721	1179	349	0	0	320	160	0	0	318	239	6964	851
	Log	2	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
18	Creel	2897	184	334	100	18	9	82	53	111	109	0	0	25	18	572	158
	Log	15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
19	Creel	11491	663	360	91	23	13	0	0	14	15	0	0	12	9	409	93
	Log	1	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
20 (SG)	Creel	26493	2828	3517	557	2323	519	797	471	76	44	0	0	1565	402	8279	982
	Log	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
28	Creel	4951	480	295	97	570	162	0	0	0	0	0	0	227	223	1091	292
	Log	9	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
29	Creel	8269	1099	309	129	188	77	1547	876	0	0	0	0	10	8	2055	888
	Log	46	-	14	-	2	-	0	-	0	-	0	-	0	-	16	-
Total	All	92547	3343	17556	1143	10690	965	2569	999	733	237	0	0	2222	520	33769	1887

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Chin = chinook, Sock=sockeye and NO ID = unidentified salmon

[3]Log = logbook reported data incorporated into final estimate

Table 9. Legal and sub-legal chinook[1] kept and released by month[2], effort, and species in the SG, 2010.

Month	Type[3]	Effort	SE	chinook Kept	SE	Legal chinook Released	SE	Sub-Legal chinook Released	SE	Total Monthly chinook Released	Total Monthly chinook Released SE
Jan	Creel	-	-	-	-	-	-	-	-	-	-
Feb	Creel	-	-	-	-	-	-	-	-	-	-
Mar	Creel	1426	137	309	58	33	12	86	32	119	34
Apr	Creel	2728	435	624	165	458	232	108	57	566	239
May	Creel	6268	514	1227	169	171	50	659	133	830	142
	Log	56	-	37	-	7	-	0	-	7	-
Jun	Creel	12564	780	3810	411	834	261	2875	429	3709	503
	Log	242	-	267	-	44	-	0	-	44	-
Jul	Creel	22395	1193	6187	812	329	85	2695	384	3025	393
	Log	545	-	782	-	76	-	0	-	76	-
Aug	Creel	29448	2616	6653	976	606	169	5002	619	5608	641
	Log	538	-	477	-	129	-	0	-	129	-
Sep	Creel	15103	1336	2924	423	559	302	2872	564	3431	639
	Log	285	-	106	-	12	-	0	-	12	-
Oct	Creel	929	216	0	0	0	0	0	0	0	0
	Log	20	-	1	-	0	-	0	-	0	-
Nov	Creel	-	-	-	-	-	-	-	-	-	-
Dec	Creel	-	-	-	-	-	-	-	-	-	-
Total	All	92547	3343	23404	1421	3258	502	14297	1027	17556	1143

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.
[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[3]Log = logbook reported data incorporated into final estimate

No sub-legal chinook were reported released in the useable logbook data.

Table 10. Legal and sub-legal chinook[1] kept and released by creel area[2], effort, and species in the SG, 2010.

Creel Area	Type[3]	Effort	SE	Chinook Kept	SE	Legal Chinook Released	SE	Sub-Legal Chinook Released	SE	Total Area Chinook Released	Total Area Chinook Released SE
13	Creel	16434	936	7416	1135	92	81	3438	480	3530	487
	Log	1414	-	1540	-	234	-	0	-	234	-
14	Creel	7357	376	2424	261	210	75	2514	336	2725	344
	Log	31	-	31	-	5	-	0	-	5	-
15	Creel	1128	108	130	43	120	60	325	127	446	141
	Log	25	-	41	-	11	-	0	-	11	-
16	Creel	3391	210	222	62	97	61	529	229	626	237
	Log	143	-	37	-	4	-	0	-	4	-
17	Creel	3451	444	2165	316	464	231	4682	683	5146	721
	Log	2	-	2	-	0	-	0	-	0	-
18	Creel	2897	184	284	55	183	52	152	86	334	100
	Log	15	-	1	-	0	-	0	-	0	-
19	Creel	11491	663	1047	153	297	87	64	26	360	91
	Log	1	-	2	-	0	-	0	-	0	-
20 (SG)	Creel	26493	2828	7421	700	1424	397	2093	391	3517	557
	Log	0	-	0	-	0	-	0	-	0	-
28	Creel	4951	480	291	156	0	0	295	97	295	97
	Log	9	-	3	-	0	-	0	-	0	-
29	Creel	8269	1099	336	126	103	106	206	73	309	129
	Log	46	-	13	-	14	-	0	-	14	-
Total	All	92547	3343	23404	1421	3258	502	14297	1027	17556	1143

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.
[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.
[3]Log = logbook reported data incorporated into final estimate
No sub-legal chinook were reported released in the useable logbook data.

Table 11. Groundfish kept by month[1], effort, and species in the SG, 2010.

Month	Type[5]	Effort	SE	Halibut	SE	Lingcod	SE	Other Ground-fish[2]	SE	Rockfish Group 1[3]	SE	Rockfish Group 2[4]	SE	Total Monthly Kept	Total Monthly SE
Jan	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	Creel	1426	137	330	63	3	3	123	69	0	0	0	1	456	93
Apr	Creel	2728	435	648	195	4	5	87	37	16	10	0	0	755	199
May	Creel	6268	514	1219	274	417	85	533	125	429	96	143	58	2741	332
	Log	56	-	0	-	15	-	28	-	4	-	0	-	47	-
Jun	Creel	12564	780	1087	235	925	206	1333	279	519	103	482	215	4346	482
	Log	242	-	1	-	29	-	47	-	9	-	8	-	94	-
Jul	Creel	22395	1193	976	268	667	161	3527	700	1959	447	1811	650	8939	1100
	Log	545	-	3	-	44	-	86	-	49	-	6	-	188	-
Aug	Creel	29448	2616	393	93	618	117	3766	1526	2075	255	638	196	7491	1567
	Log	538	-	0	-	17	-	43	-	28	-	9	-	97	-
Sep	Creel	15103	1336	286	82	449	112	1438	449	580	177	385	113	3138	515
	Log	285	-	0	-	17	-	47	-	7	-	4	-	75	-
Oct	Creel	929	216	0	0	0	0	0	0	0	0	0	0	0	0
	Log	20	-	0	-	0	-	0	-	0	-	0	-	0	-
Nov	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	All	92547	3343	4943	510	3204	319	11058	1766	5675	562	3487	724	28367	2079

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Other Groundfish includes all other groundfish except halibut, lingcod, and any rockfish.

[3]Rockfish Group 1 includes china, copper, quillback, tiger, and yelloweye.

[4]Rockfish Group 2 includes all other rockfish not included in Rockfish Group 1.

[5]Log = logbook reported data incorporated into final estimate

Table 12. Groundfish released by month[1], effort, and species in the SG, 2010.

Month	Type[5]	Effort	SE	Halibut	SE	Lingcod	SE	Other Ground-fish[2]	SE	Rockfish Group 1[3]	SE	Rockfish Group 2[4]	SE	Total Monthly Released	Total Monthly SE
Jan	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	Creel	1426	137	24	14	356	86	594	101	15	12	82	29	1071	137
Apr	Creel	2728	435	190	131	638	294	916	267	106	52	240	151	2090	448
May	Creel	6268	514	195	89	4156	642	2120	435	961	272	2332	578	9765	1009
	Log	56	-	0	-	71	-	45	-	19	-	6	-	141	-
Jun	Creel	12564	780	85	49	8968	1848	4577	720	1422	335	2625	481	17677	2068
	Log	242	-	0	-	212	-	204	-	89	-	10	-	515	-
Jul	Creel	22395	1193	37	29	11710	1499	13136	1572	3802	844	5179	947	33864	2515
	Log	545	-	0	-	253	-	218	-	72	-	18	-	561	-
Aug	Creel	29448	2616	36	31	11302	1819	6610	835	3061	542	3544	597	24554	2158
	Log	538	-	0	-	161	-	73	-	44	-	23	-	301	-
Sep	Creel	15103	1336	0	0	2673	563	2357	555	582	224	1570	456	7182	939
	Log	285	-	0	-	162	-	115	-	14	-	5	-	296	-
Oct	Creel	929	216	0	0	12	13	0	0	0	0	25	24	37	27
	Log	20	-	0	-	0	-	0	-	0	-	1	-	1	-
Nov	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	Creel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	All	92547	3343	567	172	40673	3129	30965	2065	10187	1116	15661	1432	98054	4169

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Other Groundfish includes all other groundfish except halibut, lingcod, and any rockfish.

[3]Rockfish Group 1 includes china, copper, quillback, tiger, and yelloweye.

[4]Rockfish Group 2 includes all other rockfish not included in Rockfish Group 1.

[5]Log = logbook reported data incorporated into final estimate

Table 13. Groundfish kept by creel area[2], effort, and species in the SG, 2010.

Creel Area	Type[5]	Effort	SE	Halibut	SE	Lingcod	SE	Other Ground-fish[2]	SE	Rockfish Group 1[3]	SE	Rockfish Group 2[4]	SE	Total Area Kept	Total Area SE
13	Creel	16434	936	59	44	247	78	721	350	209	94	161	76	1396	381
	Log	1414	-	4	-	63	-	82	-	36	-	11	-	196	-
14	Creel	7357	376	19	17	203	73	1048	285	284	95	102	47	1655	313
	Log	31	-	0	-	3	-	2	-	4	-	0	-	9	-
15	Creel	1128	108	2	2	14	9	0	0	267	78	0	0	284	79
	Log	25	-	0	-	4	-	0	-	1	-	0	-	5	-
16	Creel	3391	210	25	15	396	97	750	204	1393	188	83	51	2648	299
	Log	143	-	0	-	23	-	20	-	45	-	10	-	98	-
17	Creel	8451	444	11	12	999	191	605	238	430	121	992	440	3038	549
	Log	2	-	0	-	0	-	0	-	0	-	0	-	0	-
18	Creel	2897	184	0	0	275	96	1435	285	551	105	187	77	2448	327
	Log	15	-	0	-	23	-	143	-	11	-	0	-	177	-
19	Creel	11491	663	3700	403	362	90	1331	450	619	178	518	206	6531	668
	Log	1	-	0	-	0	-	0	-	0	-	0	-	0	-
20 (SG)	Creel	26493	2828	1122	308	567	163	3734	1540	1130	237	1366	520	7920	1680
	Log	0	-	0	-	0	-	0	-	0	-	0	-	0	-
28	Creel	4951	480	0	0	14	14	633	237	589	372	42	34	1278	443
	Log	9	-	0	-	0	-	0	-	0	-	0	-	0	-
29	Creel	8269	1099	0	0	5	6	550	325	105	68	8	7	668	332
	Log	46	-	0	-	6	-	4	-	0	-	6	-	16	-
Total	All	92547	3343	4943	510	3204	319	11058	1766	5675	562	3487	724	28367	2079

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Other Groundfish includes all other groundfish except halibut, lingcod, and any rockfish.

[3]Rockfish Group 1 includes china, copper, quillback, tiger, and yelloweye.

[4]Rockfish Group 2 includes all other rockfish not included in Rockfish Group 1.

[5]Log = logbook reported data incorporated into final estimate

Table 14. Groundfish released by creel area[3], effort, and species in the SG, 2010.

Creel Area	Type[5]	Effort	SE	Halibut	SE	Lingcod	SE	Other Ground-fish[2]	SE	Rockfish Group 1[3]	SE	Rockfish Group 2[4]	SE	Total Area Released	Total Area SE
13	Creel	16434	936	0	0	1177	323	0	0	0	0	706	224	1882	393
	Log	1414	-	0	-	311	-	428	-	97	-	32	-	868	-
14	Creel	7357	376	3	2	2016	809	2373	323	193	64	570	166	5154	890
	Log	31	-	0	-	37	-	10	-	27	-	1	-	75	-
15	Creel	1128	108	0	0	359	152	69	46	145	48	48	30	621	169
	Log	25	-	0	-	16	-	0	-	4	-	1	-	21	-
16	Creel	3391	210	0	0	6942	1232	1706	431	2432	509	1885	407	12966	1459
	Log	143	-	0	-	236	-	66	-	87	-	10	-	399	-
17	Creel	8451	444	0	0	6903	1725	3414	633	1893	440	4266	739	16476	2029
	Log	2	-	0	-	0	-	0	-	1	-	0	-	1	-
18	Creel	2897	184	0	0	1639	291	3138	412	2450	348	697	398	7924	731
	Log	15	-	0	-	121	-	116	-	18	-	0	-	255	-
19	Creel	11491	663	476	165	7070	1145	14746	1661	723	193	1732	385	24746	2070
	Log	1	-	0	-	0	-	0	-	0	-	0	-	0	-
20 (SG)	Creel	26493	2828	88	50	13574	1765	4280	738	1042	291	5335	974	24320	2167
	Log	0	-	0	-	0	-	0	-	0	-	0	-	0	-
28	Creel	4951	480	0	0	86	49	306	207	926	726	315	72	1632	760
	Log	9	-	0	-	1	-	1	-	0	-	0	-	2	-
29	Creel	8269	1099	0	0	48	35	278	231	146	128	45	35	517	268
	Log	46	-	0	-	137	-	34	-	4	-	19	-	194	-
Total	All	92547	3343	567	172	40673	3129	30965	2065	10187	1116	15661	1432	98054	4169

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]Other Groundfish includes all other groundfish except halibut, lingcod, and any rockfish.

[3]Rockfish Group 1 includes china, copper, quillback, tiger, and yelloweye.

[4]Rockfish Group 2 includes all other rockfish not included in Rockfish Group 1.

[5]Log = logbook reported data incorporated into final estimate

Table 15. Groundfish retained catch summary in the SG, 2010.

Groundfish Species	Catch	% of Total Groundfish Catch	Major Catch Area
Halibut (*Hippoglossus stenolepis)*	4,943	17.4%	19
Lingcod (*Ophiodon elongatus*)	3,204	11.3%	17 and 20
Rockfish (*Sebastes* spp.)	9,161	32.3%	20(SG), 16, and 17
Other groundfish	11,058	39.0%	20(SG)
Total	**28,366**	**100%**	

Table 16. Rockfish retained catch summary in the SG, 2010.

Rockfish Species	Catch	% of Total Groundfish Catch	Major Catch Area
Copper (*Sebastes caurinus)*	2,176	23.8%	28 and 18
Quillback (*Sebastes maliger*)	2,570	28.1%	16 and 20(SG)
Other (*Sebastes* spp.)	4,415	48.2%	20 and 17
Total	**9,161**	**100%**	

Table 17. Number of adipose-clipped chinook observed by month[1] and region[2] in the SG creel survey, 2010.

Month		North SG	South SG	Victoria	Total
Jan	Unmarked	-	-	-	-
to	Marked	-	-	-	-
Feb	Total	-	-	-	-
Mar	Unmarked	-	-	11	11
Mar	Marked	-	-	49	49
Mar	Total	-	-	60	60
Apr	Unmarked	-	-	13	13
Apr	Marked	-	-	48	48
Apr	Total	-	-	61	61
May	Unmarked	20	40	8	68
May	Marked	3	7	35	45
May	Total	23	47	43	113
Jun	Unmarked	65	38	38	141
Jun	Marked	2	19	59	80
Jun	Total	67	57	97	221
Jul	Unmarked	128	17	44	189
Jul	Marked	10	7	16	33
Jul	Total	138	24	60	222
Aug	Unmarked	100	26	120	246
Aug	Marked	6	6	45	57
Aug	Total	106	32	165	303
Sep	Unmarked	45	8	51	104
Sep	Marked	1	1	34	36
Sep	Total	46	9	85	140
Oct	Unmarked	0	-	-	0
Oct	Marked	0	-	-	0
Oct	Total	0	-	-	0
Nov	Unmarked	-	-	-	-
to	Marked	-	-	-	-
Dec	Total	-	-	-	-
Total	Unmarked	358	129	285	772
	Marked	22	40	286	348
	Total	380	169	571	1120

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.
[2]North SG represented by creel areas 13 to 16; South SG represented by creel areas 17, 18, 28, and 29 and Victoria represented by creel areas 19 and 20(SG).

Table 18. Number of adipose-clipped coho observed by month[1] and region[2] in the SG creel survey, 2010.

Month		North SG	South SG	Victoria	Total
Jan	Unmarked	-	-	-	-
to	Marked	-	-	-	-
Feb	Total	-	-	-	-
Mar	Unmarked	-	-	0	0
Mar	Marked	-	-	0	0
Mar	Total	-	-	0	0
Apr	Unmarked	-	-	0	0
Apr	Marked	-	-	0	0
Apr	Total	-	-	0	0
May	Unmarked	0	0	0	0
May	Marked	0	0	3	3
May	Total	0	0	3	3
Jun	Unmarked	2	0	2	4
Jun	Marked	3	1	7	11
Jun	Total	5	1	9	15
Jul	Unmarked	1	0	0	1
Jul	Marked	16	17	3	36
Jul	Total	17	17	3	37
Aug	Unmarked	2	1	3	6
Aug	Marked	16	24	10	50
Aug	Total	18	25	13	56
Sep	Unmarked	0	0	9	9
Sep	Marked	6	3	18	27
Sep	Total	6	3	27	36
Oct	Unmarked	0	-	-	0
Oct	Marked	3	-	-	3
Oct	Total	3	-	-	3
Nov	Unmarked	-	-	-	-
to	Marked	-	-	-	-
Dec	Total	-	-	-	-
Total	Unmarked	5	1	14	20
	Marked	44	45	41	130
	Total	49	46	55	150

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.
[2]North SG represented by creel areas 13 to 16; South SG represented by creel areas 17, 18, 28, and 29 and Victoria represented by creel areas 19 and 20(SG).

Table 19. Origin of coded-wire tagged chinook caught in the SG, 2010.

Origin	Country	Total Submitted[1]	Percent
Chilliwack R	CAN	54	19.4%
Cowichan R	CAN	53	19.1%
Shuswap R Low	CAN	18	6.5%
Puntledge R	CAN	13	4.7%
Harrison R	CAN	12	4.3%
Big Qualicum R	CAN	7	2.5%
Quinsam R	CAN	7	2.5%
Nicola R	CAN	4	1.4%
Porteau Cv	CAN	4	1.4%
Cheakamus R	CAN	3	1.1%
Chemainus R	CAN	1	0.4%
Phillips R	CAN	1	0.4%
Robertson Cr	CAN	1	0.4%
Samish (Friday Cr)	USA	26	9.4%
Skagit R	USA	12	4.3%
Voight Cr	USA	7	2.5%
Grovers Cr	USA	6	2.2%
Skykomish R	USA	6	2.2%
Big Soos Cr	USA	5	1.8%
George Adams (Purdy)	USA	5	1.8%
Clear Cr	USA	3	1.1%
Nooksack -SF	USA	3	1.1%
Stillaguamish R -NF	USA	3	1.1%
Big Cr hatchery	USA	2	0.7%
Chambers Cr	USA	2	0.7%
Deschutes R	USA	2	0.7%
Finch Cr	USA	2	0.7%
Kalama Cr	USA	2	0.7%
Snake R	USA	2	0.7%
Spring Cr	USA	2	0.7%
Clackamas R early	USA	1	0.4%
F Snake R	USA	1	0.4%
Issaquah Cr	USA	1	0.4%
Nemah R	USA	1	0.4%
Sandy R (Sandy Ht)	USA	1	0.4%
Sol Duc R	USA	1	0.4%
Sooes R	USA	1	0.4%
Wells hatchery	USA	1	0.4%
White R	USA	1	0.4%
Willamette R Mid Fk	USA	1	0.4%
	TOTAL	278	100.0%

[1]Total submitted coded-wire tagged chinook within the SG survey area for January to December
Source: MRP_PUB.Releases (CWT) JOIN Recoveries (MRP Data Extractor) - Date Run:3/6/2012 3:11:04 PM

Table 20. Monthly[2] number and percent age[1] composition of chinook sampled for age in the SG creel survey, 2010.

Month	Age 2		Age 3		Age 4		Age 5		Age 6		Total Sampled
	n	%	n	%	n	%	n	%	n	%	
Jan	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	0	0.0%	12	54.5%	10	45.5%	0	0.0%	0	0.0%	22
Apr	0	0.0%	10	71.4%	3	21.4%	1	7.1%	0	0.0%	14
May	0	0.0%	30	55.6%	22	40.7%	2	3.7%	0	0.0%	54
Jun	0	0.0%	40	48.2%	37	44.6%	5	6.0%	1	1.2%	83
Jul	0	0.0%	66	53.7%	52	42.3%	5	4.1%	0	0.0%	123
Aug	1	1.1%	46	48.9%	44	46.8%	3	3.2%	0	0.0%	94
Sep	0	0.0%	28	71.8%	9	23.1%	1	2.6%	1	2.6%	39
Oct	2	40.0%	3	60.0%	0	0.0%	0	0.0%	0	0.0%	5
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	3		235		177		17		2		434
Overall age composition of catch	0.7%		54.1%		40.8%		3.9%		0.5%		

[1]For the purposes of this report, age is defined as the year of life caught based on the Gilbert-Rich age.
[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Table 21. Monthly[2] estimated retained catches at age[1] of chinook in the SG, 2010.

Month	Age 2	Age 3	Age 4	Age 5	Age 6	Total
Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	0	169	140	0	0	309
Apr	0	446	134	45	0	624
May	0	702	515	47	0	1264
Jun	0	1965	1817	246	49	4077
Jul	0	3739	2946	283	0	6969
Aug	76	3489	3337	228	0	7130
Sep	0	2175	699	78	78	3030
Oct	0	0	0	0	0	1 [3]
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
Total	76	12685	9590	926	127	23404
Annual Percentage	0.7%	54.1%	40.8%	3.9%	0.5%	100%

[1]For the purposes of this report, age is defined as the year of life caught based on the Gilbert-Rich age.
[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[3]One fish was caught in October by a logbook participant but no age samples were collected for this month thus unable to classify.

Table 22. Monthly[2] mean nose-fork length (L) at age[1] of chinook sampled in the SG creel survey, 2010.

Month	Age 2		Age 3		Age 4		Age 5		Age 6		Total Sampled
	n	L (mm)	n	L (mm)	n	L (mm)	n	L (mm)	n	L (mm)	
Jan	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	0	-	12	615	10	667	0	-	0	-	22
Apr	0	-	10	633	3	730	1	840	0	-	14
May	0	-	30	677	22	730	2	795	0	-	54
Jun	0	-	40	705	36	729	5	856	1	907	82
Jul	0	-	66	732	52	822	5	878	0	-	123
Aug	1	580	45	744	44	828	3	805	0	-	93
Sep	0	-	28	748	9	696	1	850	0	-	38
Oct	0	-	0	-	0	-	0	-	0	-	0
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total Samples/Mean	1	580	231	714	176	776	17	845	1	907	426

[1]For the purposes of this report, age is defined as the year of life caught based on the Gilbert-Rich age.
[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Table 23. Percent age[1] composition of chinook in the SG creel survey, 1986 to 2010.

Catch Year	2	3	4	5+	Reference
1986	10.9	44.9	40.4	3.8	Shardlow and Collicutt (1989a)
1987	7.8	62.1	25	5.2	Shardlow and Collicutt (1989b)
1988	26.4	35.3	35.4	2.8	Shardlow and Collicutt (1989c)
1989	3.1	83.3	10.5	3.1	Collicutt and Shardlow (1990)
1990	4	37	53	6	Hardie et al. (1999)
1991	2	67	25	6	Hardie et al. (1999)
1992	7	58	28	7	Hardie et al. (1999)
1993	1	69	26	4	Hardie et al. (1999)
1994	2	50	40	8	Hardie et al. (1999)
1995	2	62	29	7	Hardie et al. (1999)
1996	1	70	26	3	Hardie et al. (1999)
1997	0	66	29	5	Hardie et al. (1999)
1998	5	31	55	9	Hardie et al. (1999)
1999	0.3	73.4	21.4	4.9	Hardie et al. (2001)
2000	2.2	56.6	35	6.2	Hardie et al. (2002)
2001	1.4	59	32.8	4.4	Hardie et al. (2003)
2002	2.1	53.9	41.5	2.5	Unpublished data
2003	3.9	45.7	43.4	7.0	Unpublished data
2004	3.8	46.2	41.7	5.3	Unpublished data
2005	6.6	44.0	45.4	4.0	Unpublished data
2006	5.4	46.2	41.6	6.8	Unpublished data
2007	5.2	43.0	44.0	7.8	Carter and Zetterberg (2010)
2008	1.8	60.2	33.5	4.5	Zetterberg and Carter (2010)
2009	10.4	28.2	48.0	13.3	Zetterberg et al (2012)
2010	0.7	54.1	40.8	4.4	Calculated from 2010 data

[1]For the purposes of this report, age is defined as the year of life caught based on the Gilbert-Rich age.

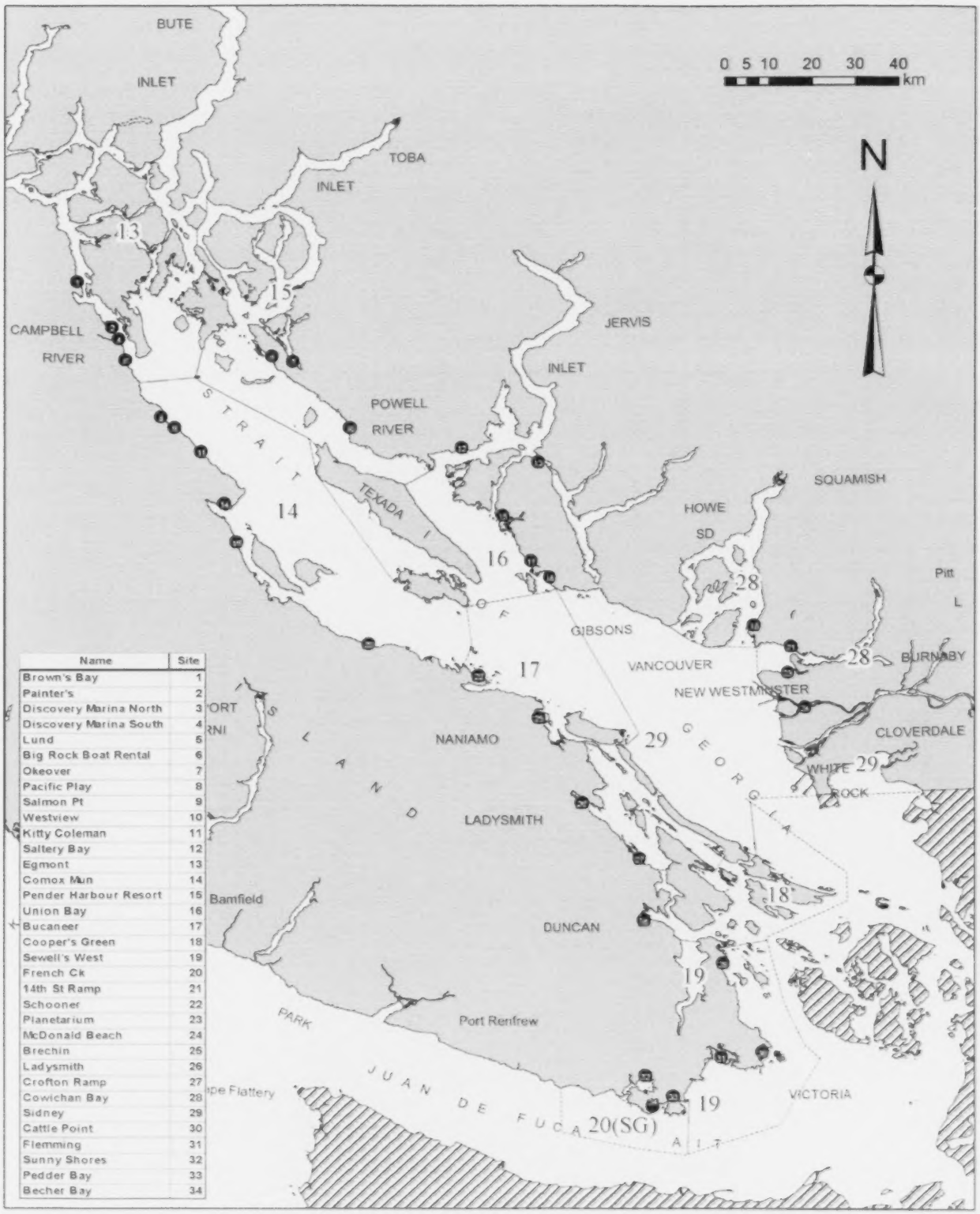
Table 24. Sub-legal chinook retention in the SG creel survey, 1989 to 2010[1].

Year	Victoria[1]	Strait of Georgia[2]	Reference
1989	2%	20%	Collicutt and Shardlow (1990)
1990	1%	10%	Collicutt and Shardlow (1992)
1991	<1%	7%	Collicutt and Shardlow (1993)
1992	2%	2%	Hardie et al. (1999)
1993	1%	2%	Hardie et al. (1999)
1994	0%	2%	Hardie et al. (1999)
1995	0%	3%	Hardie et al. (1999)
1996	0%	1%	Hardie et al. (1999)
1997	0%	2%	Hardie et al. (1999)
1998	1%	6%	Hardie et al. (1999)
1999	0%	<1%	Hardie et al. (2001)
2000	1%	2%	Hardie et al. (2002)
2001	1%	2%	Hardie et al. (2003)
2002	0%	2%	Unpublished data
2003	<1%	1%	Unpublished data
2004	0%	2%	Unpublished data
2005	<1%	3%	Unpublished data
2006	2%	1%	Unpublished data
2007	1%	5%	Carter and Zetterberg (2010)
2008	2%	2%	Zetterberg and Carter (2010)
2009	2%	4%	Zetterberg et al (2012)
2010	1%	1%	Calculated from 2010 data

[1]Victoria represents creel area 19 and 20(SG).

[2]Strait of Georgia represents creel area 13 to 18, 28 and 29.

FIGURES



Name	Site
Brown's Bay	1
Painter's	2
Discovery Marina North	3
Discovery Marina South	4
Lund	5
Big Rock Boat Rental	6
Okeover	7
Pacific Play	8
Salmon Pt	9
Westview	10
Kitty Coleman	11
Saltery Bay	12
Egmont	13
Comox Mun	14
Pender Harbour Resort	15
Union Bay	16
Bucaneer	17
Cooper's Green	18
Sewell's West	19
French Ck	20
14th St Ramp	21
Schooner	22
Planetarium	23
McDonald Beach	24
Brechin	25
Ladysmith	26
Crofton Ramp	27
Cowichan Bay	28
Sidney	29
Cattle Point	30
Flemming	31
Sunny Shores	32
Pedder Bay	33
Becher Bay	34

Figure 1. SG creel survey study area and landing site locations, 2010.

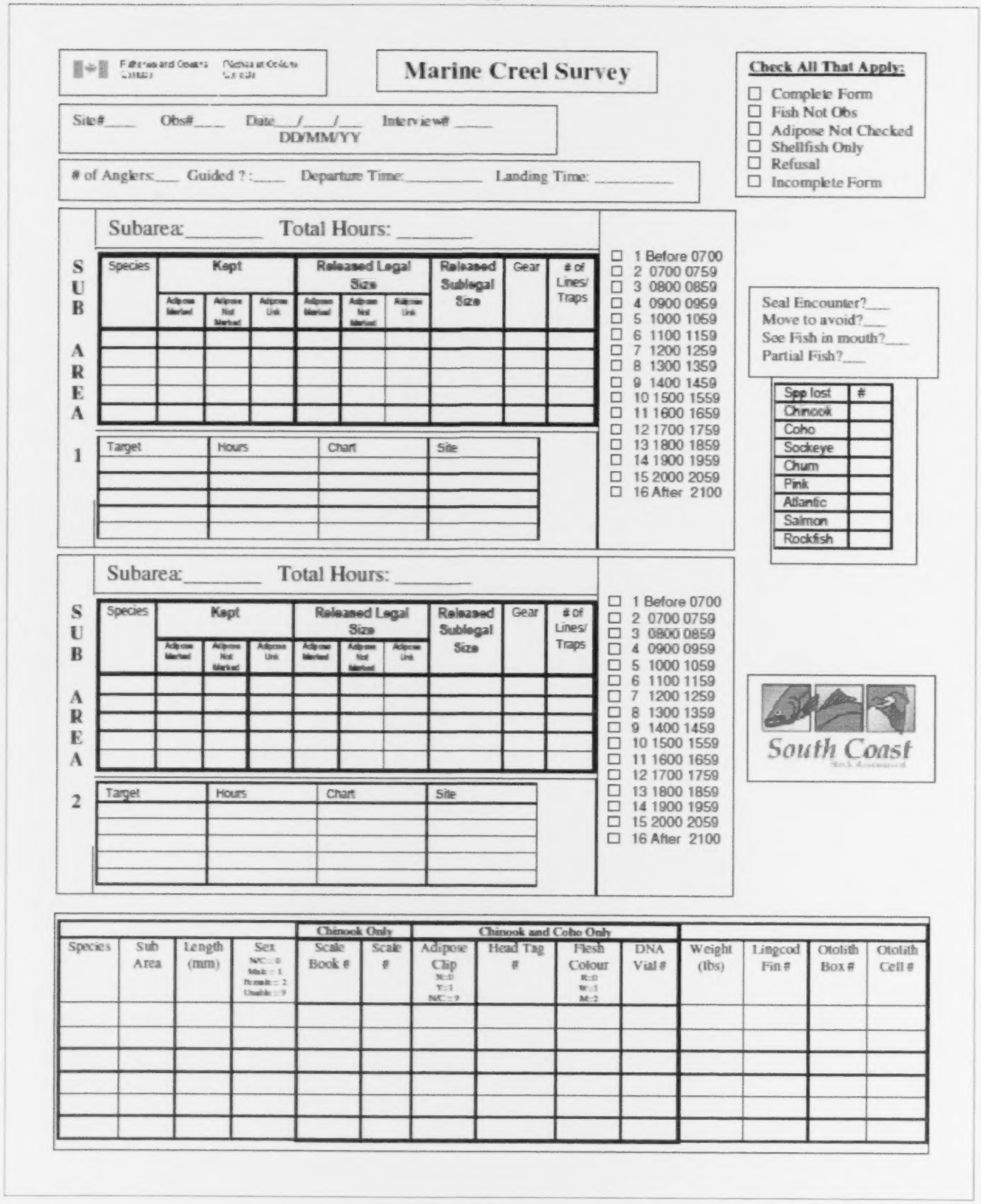


Figure 2. SG creel survey interview form, 2010.

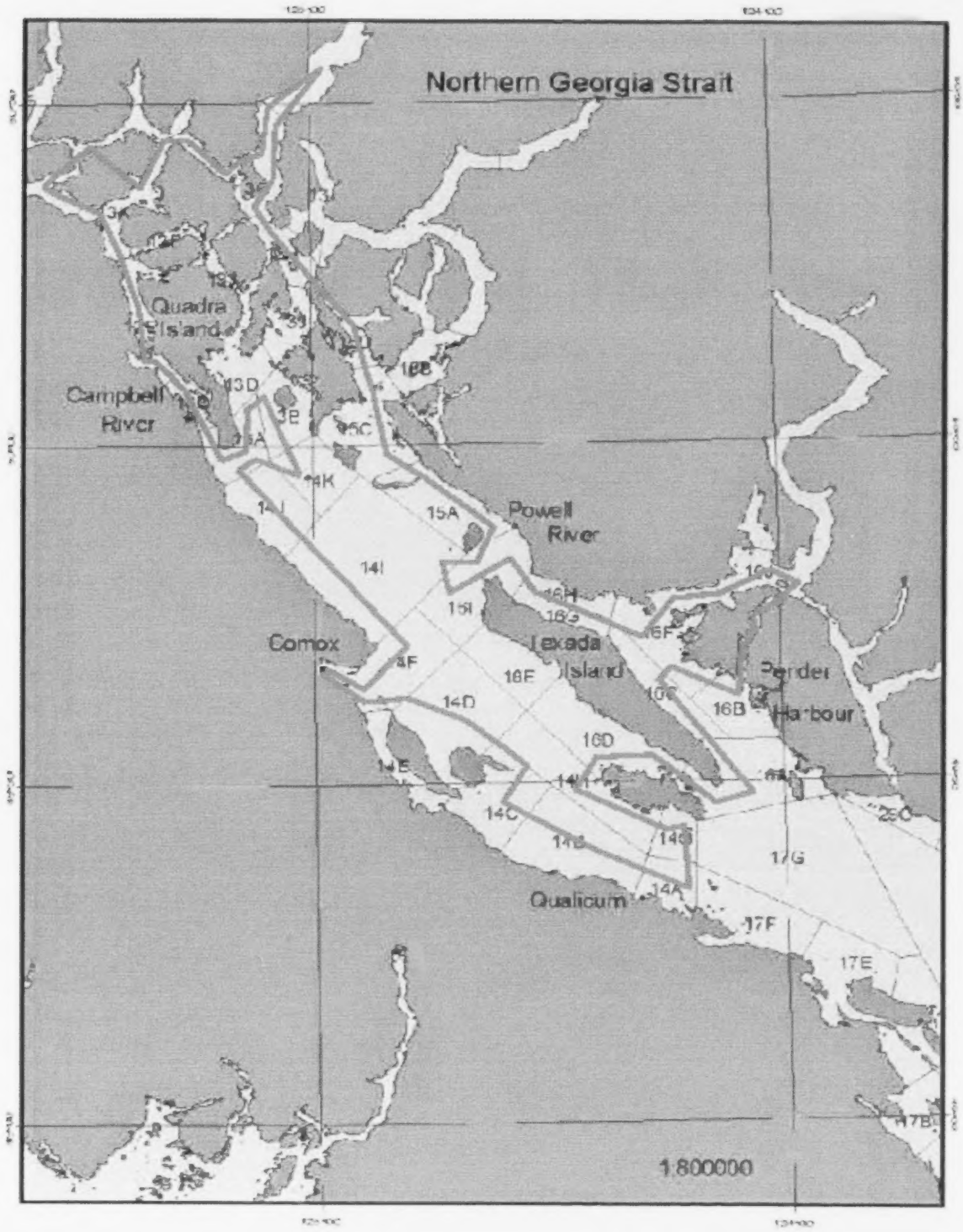


Figure 3a. SG creel survey northern aerial survey route, 2010.

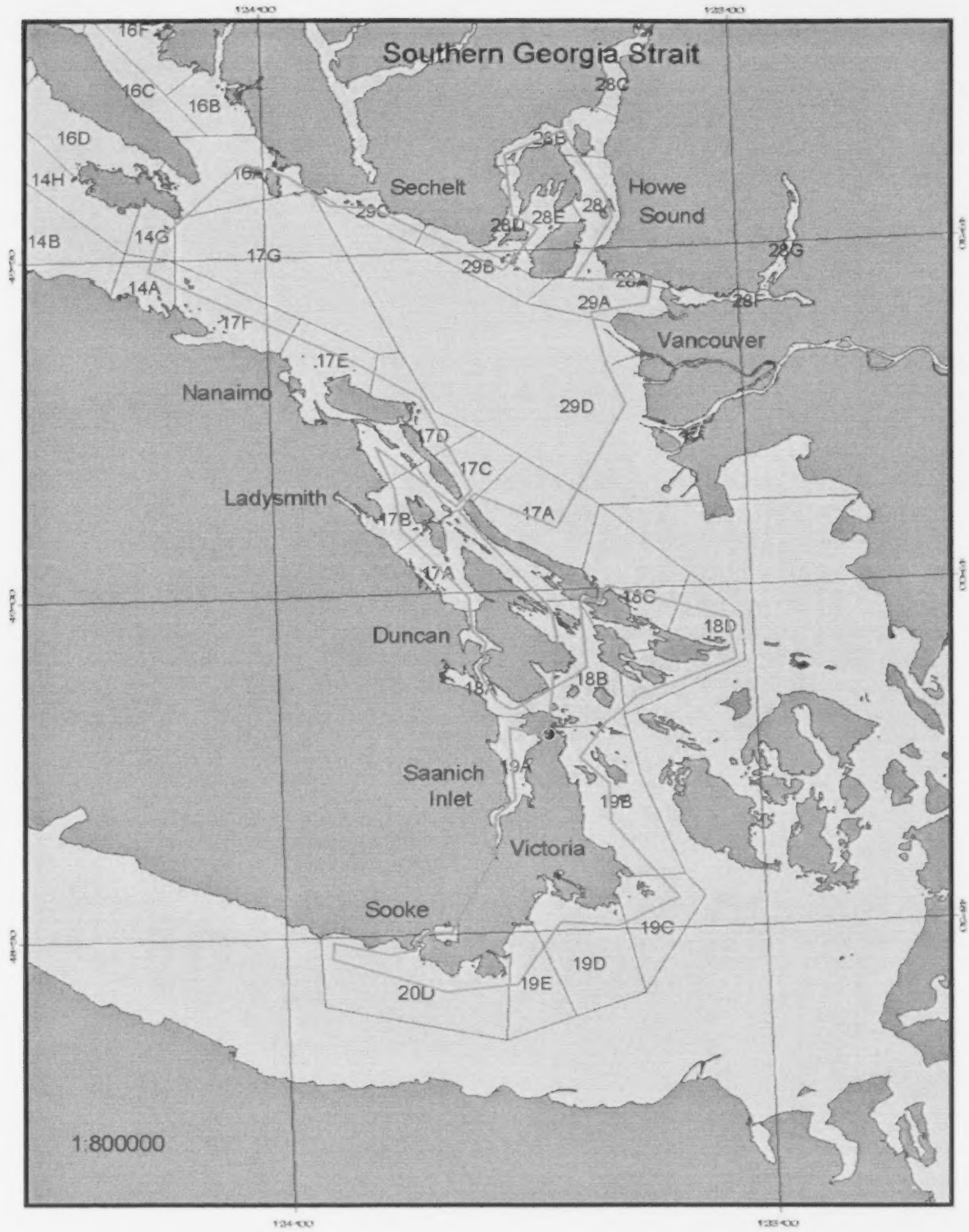


Figure 3b. SG creel survey southern aerial survey route, 2010.

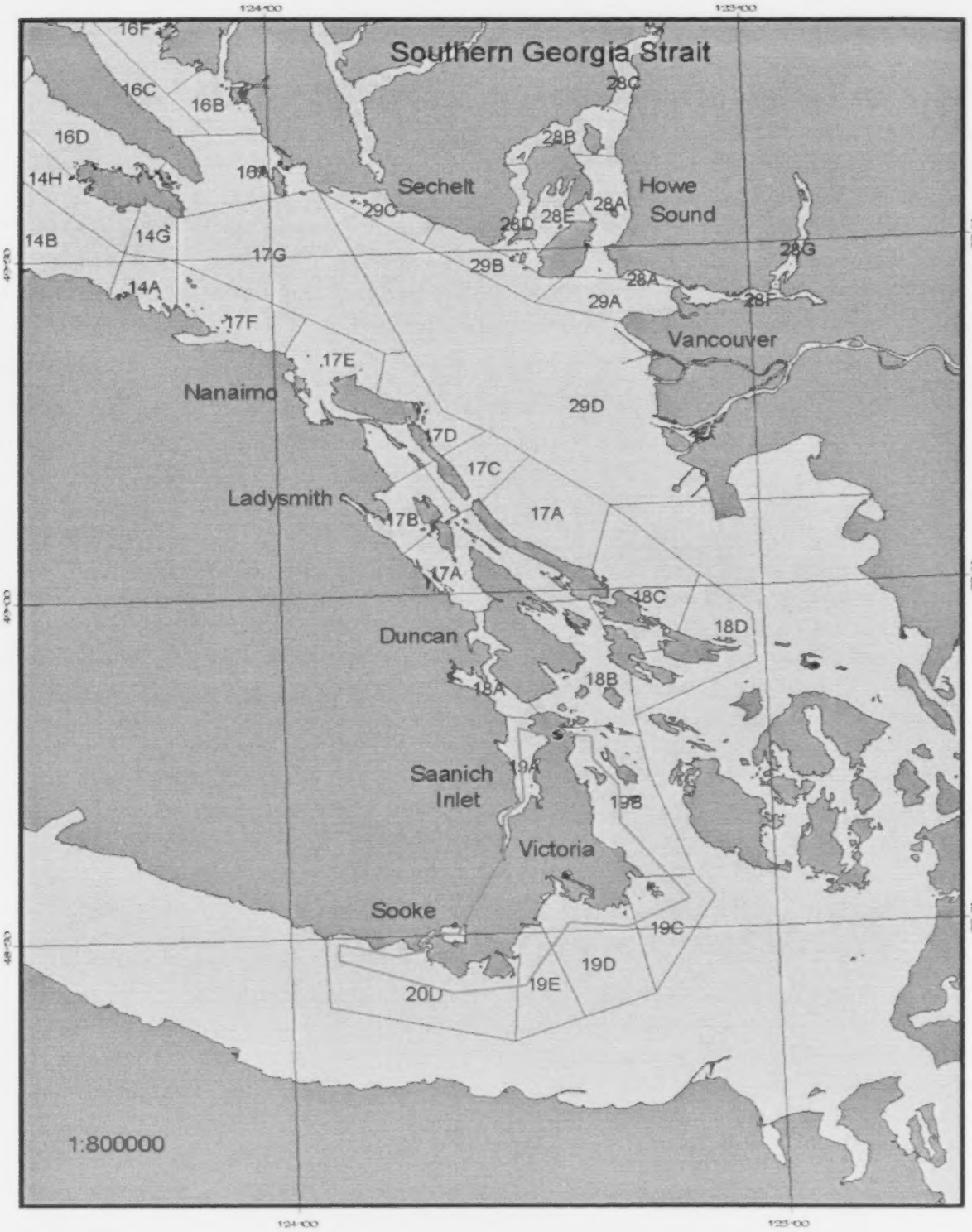


Figure 3c. SG creel survey southern aerial survey winter route, 2010.

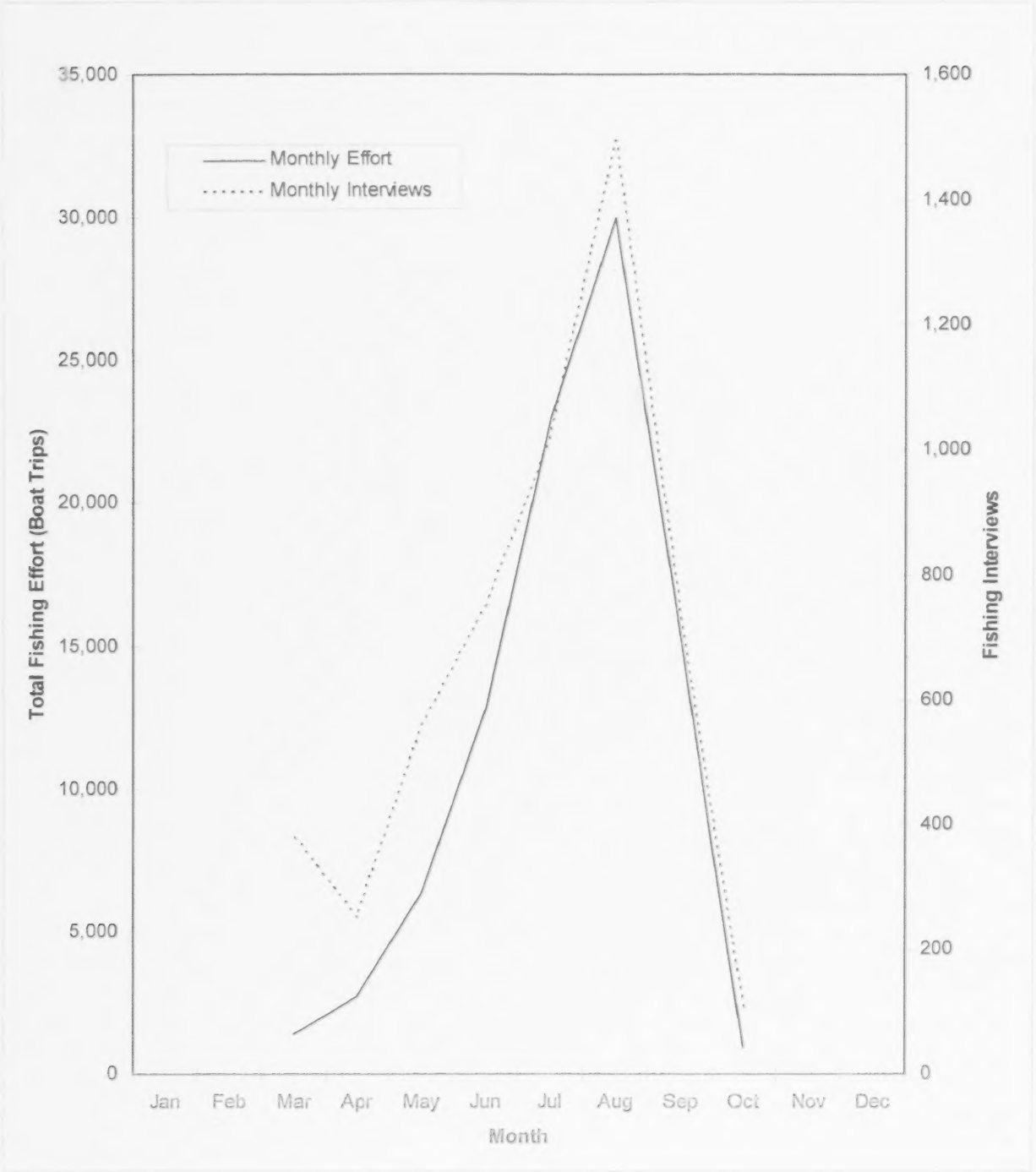


Figure 4. Comparison of monthly[1] total fishing effort in the SG and monthly[1] interviews in the SG creel survey, 2010.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area14 to 18, 28 and 29) were surveyed between May and September.

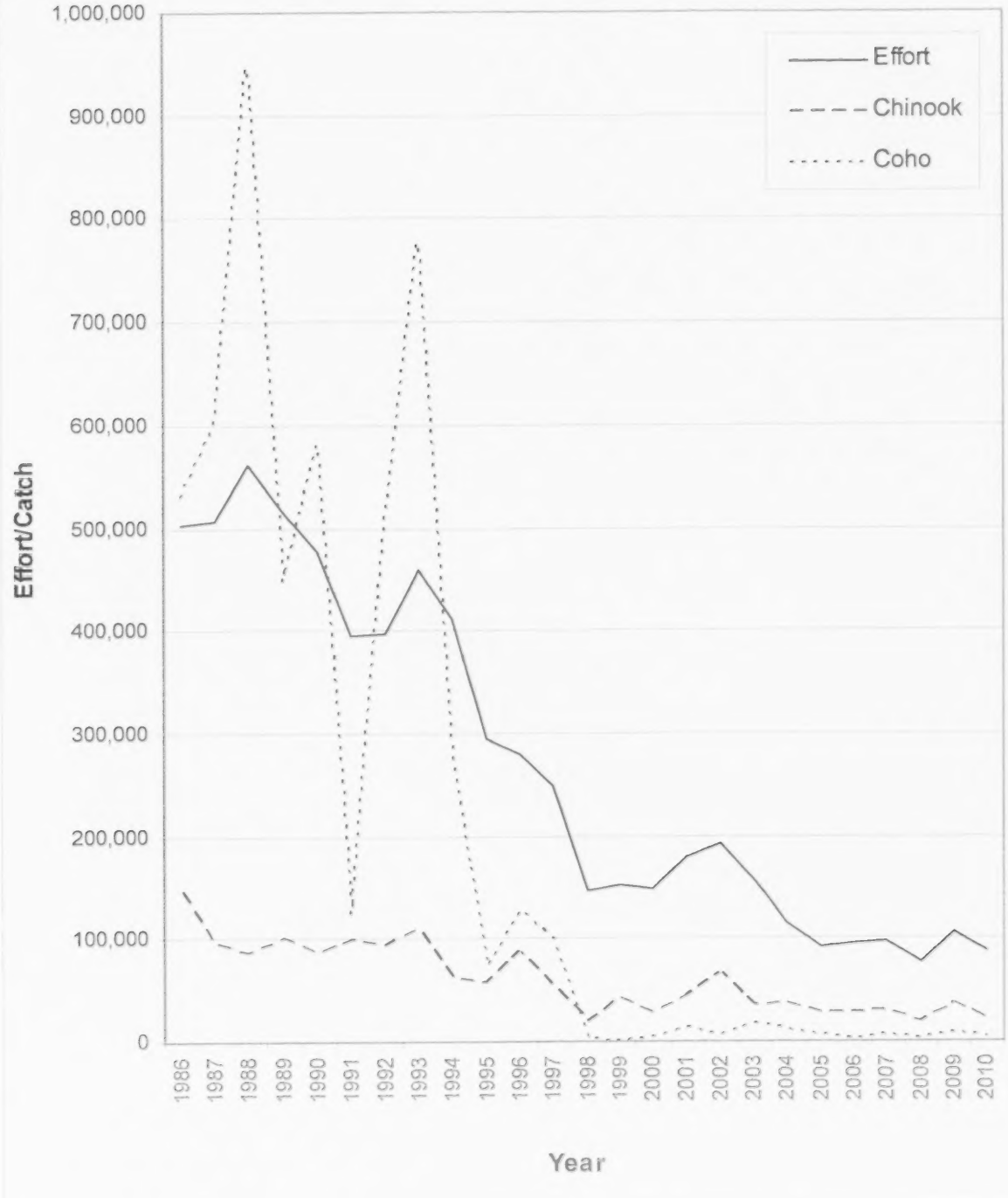


Figure 5. Effort (boat trips) statistics and estimated kept catches[1] of chinook and coho salmon in the SG, 1986 to 2010.

[1]This figure uses estimate values from May to September inclusively for historical comparisons.

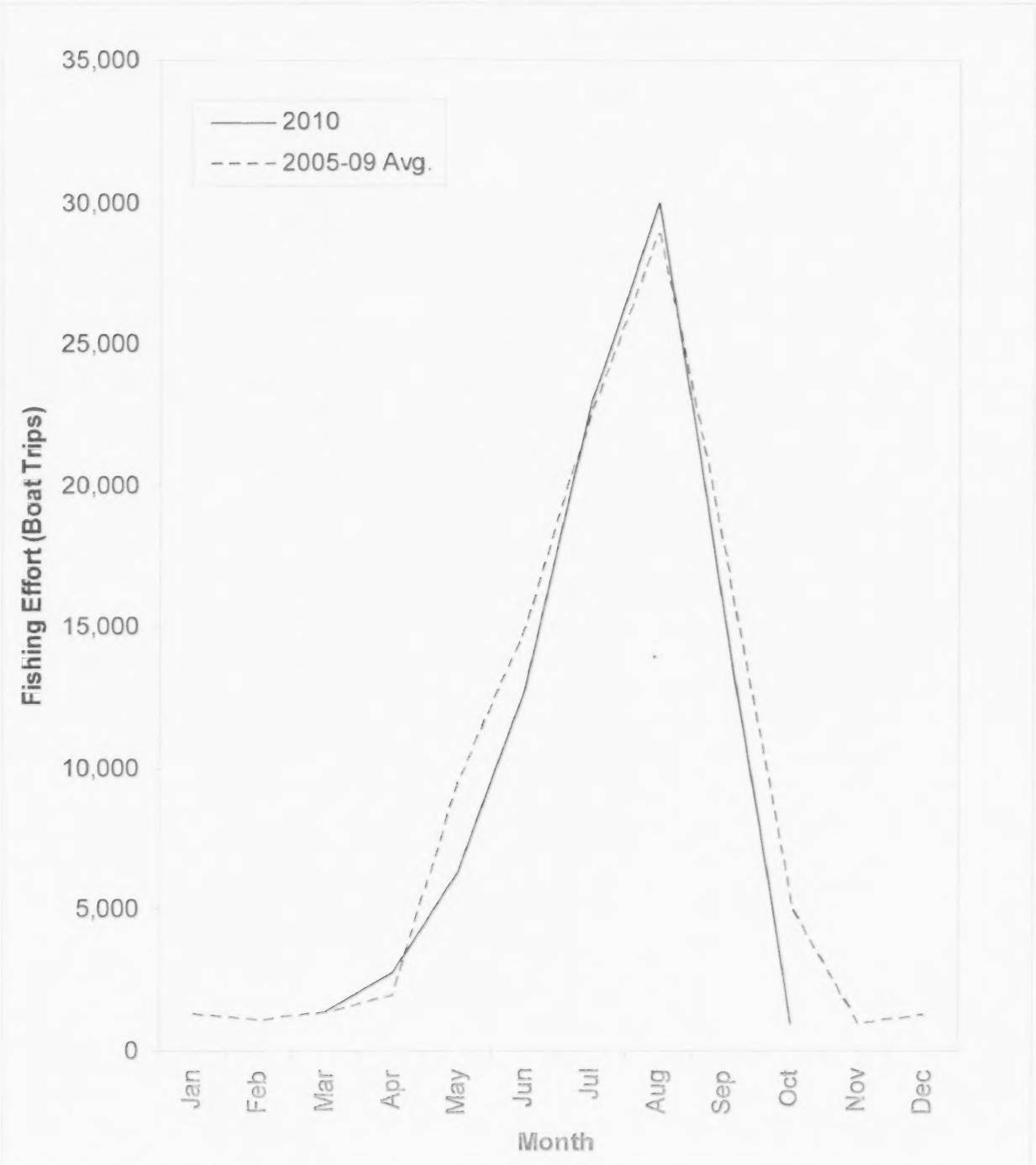


Figure 6. Monthly[1] fishing effort estimates (boat trips) in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

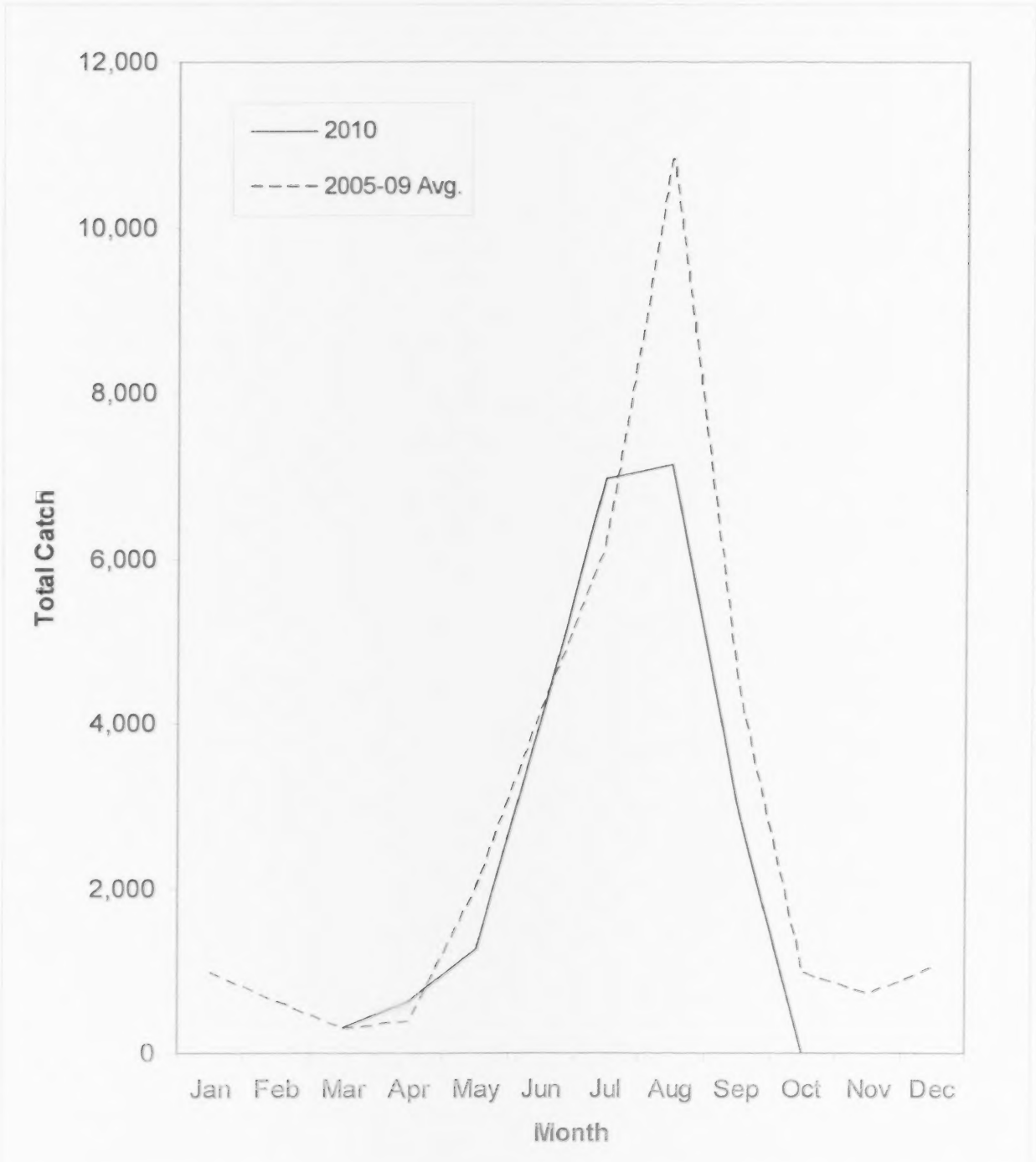


Figure 7. Monthly[1] chinook kept catches in the SG during 2010 and the five-year average for 2005 to 2009.

[1] In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

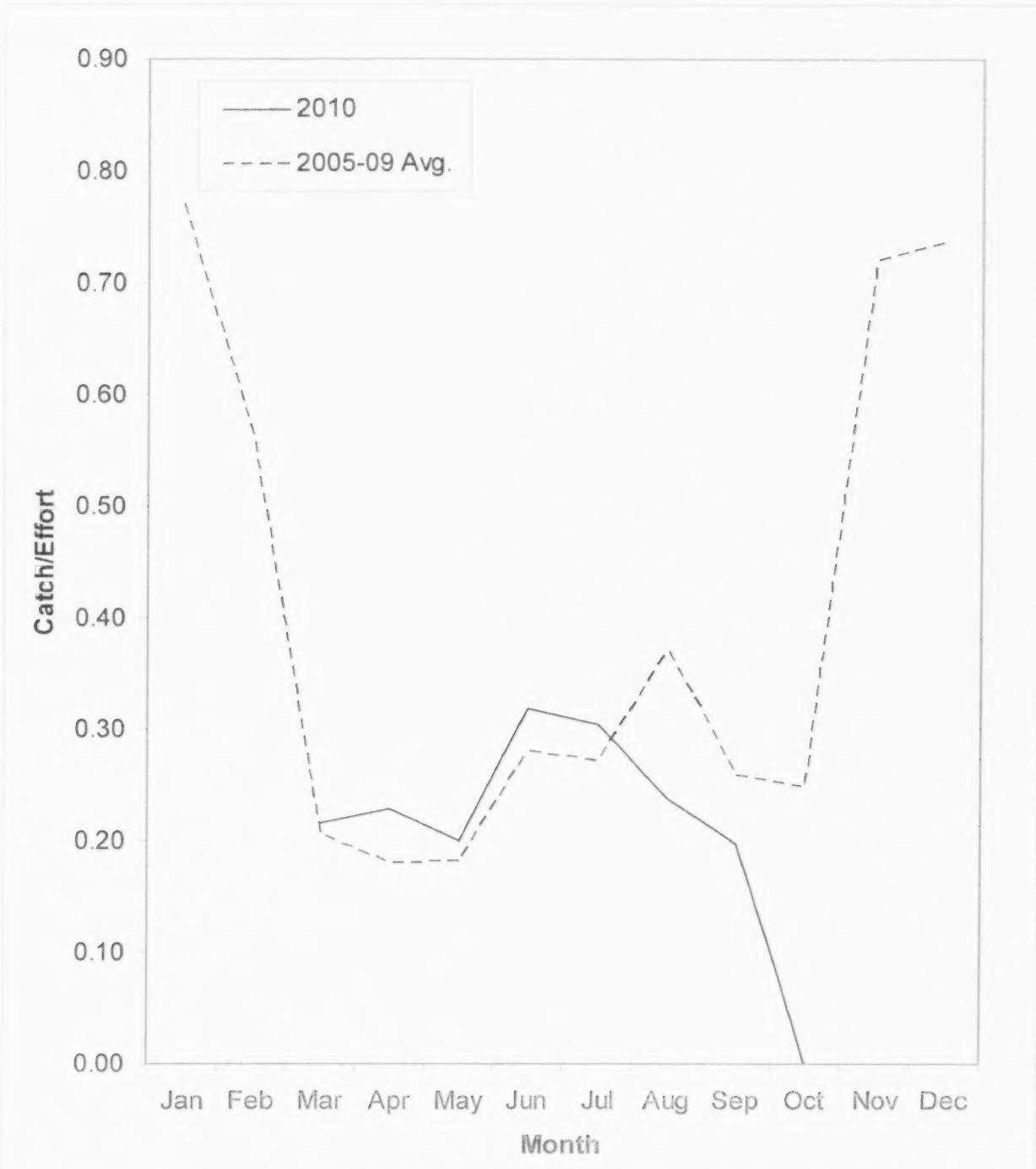
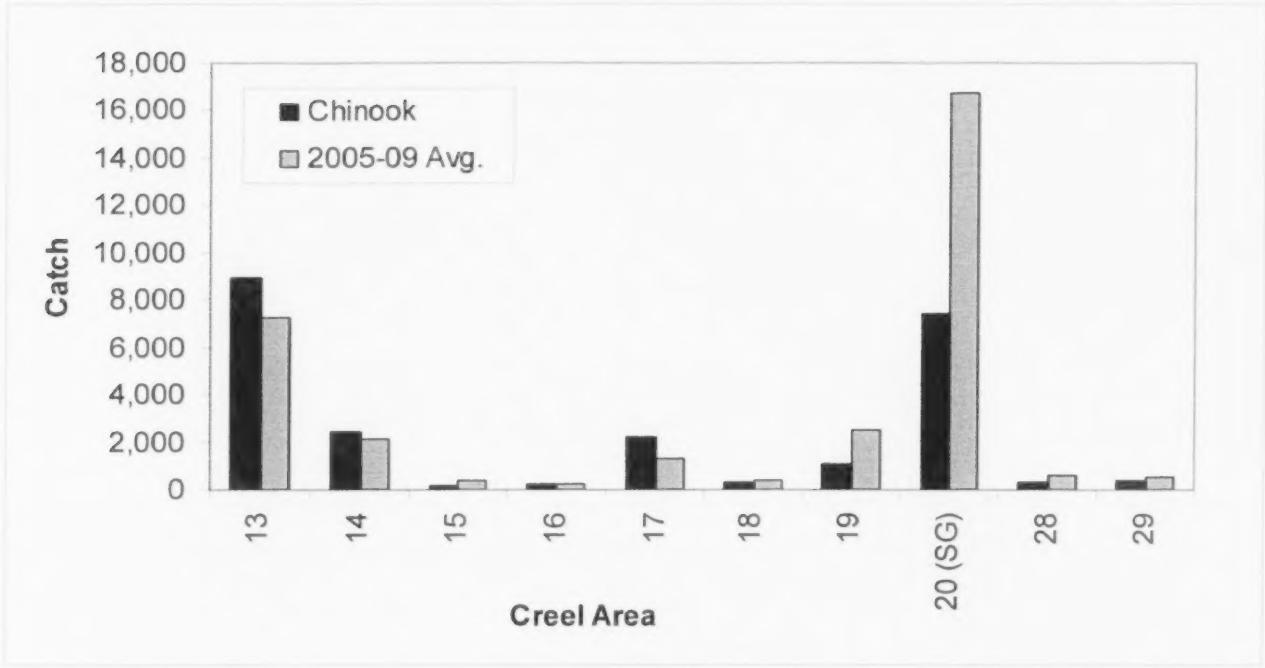


Figure 8. Monthly[1] chinook kept catch per boat trip in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.



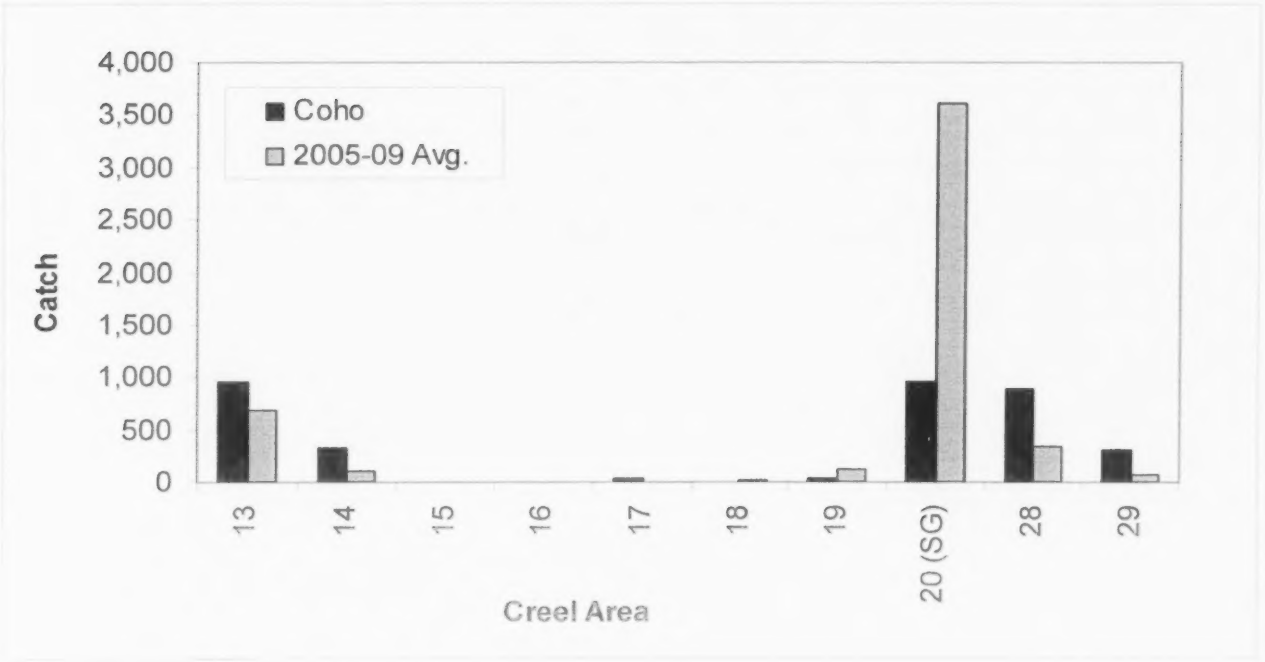


Figure 9. Annual estimated kept catches of chinook and coho salmon by creel area[1] in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

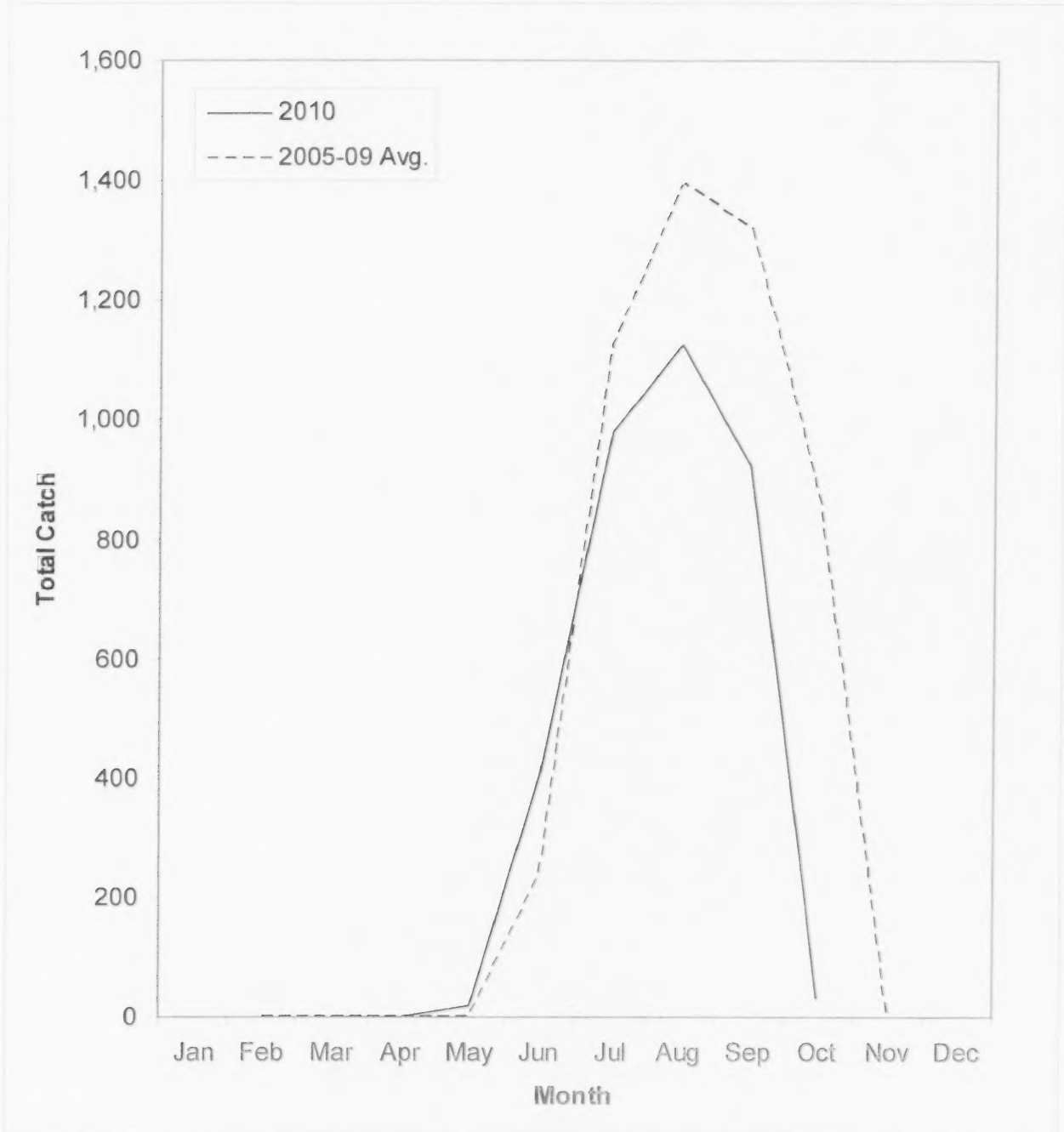


Figure 10. Monthly[1] estimated coho kept catches in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

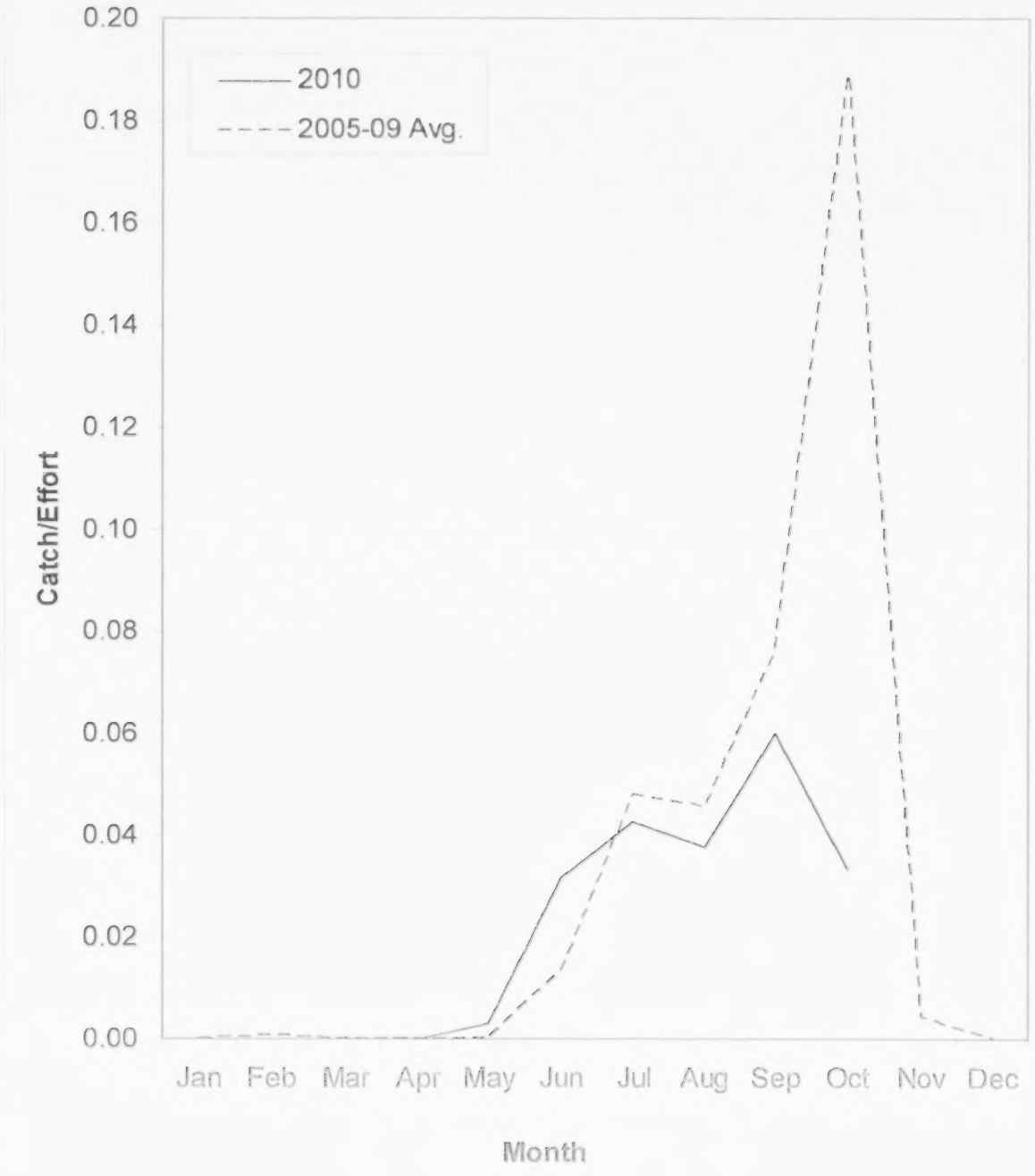


Figure 11. Monthly[1] estimated coho kept catch per boat trip in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

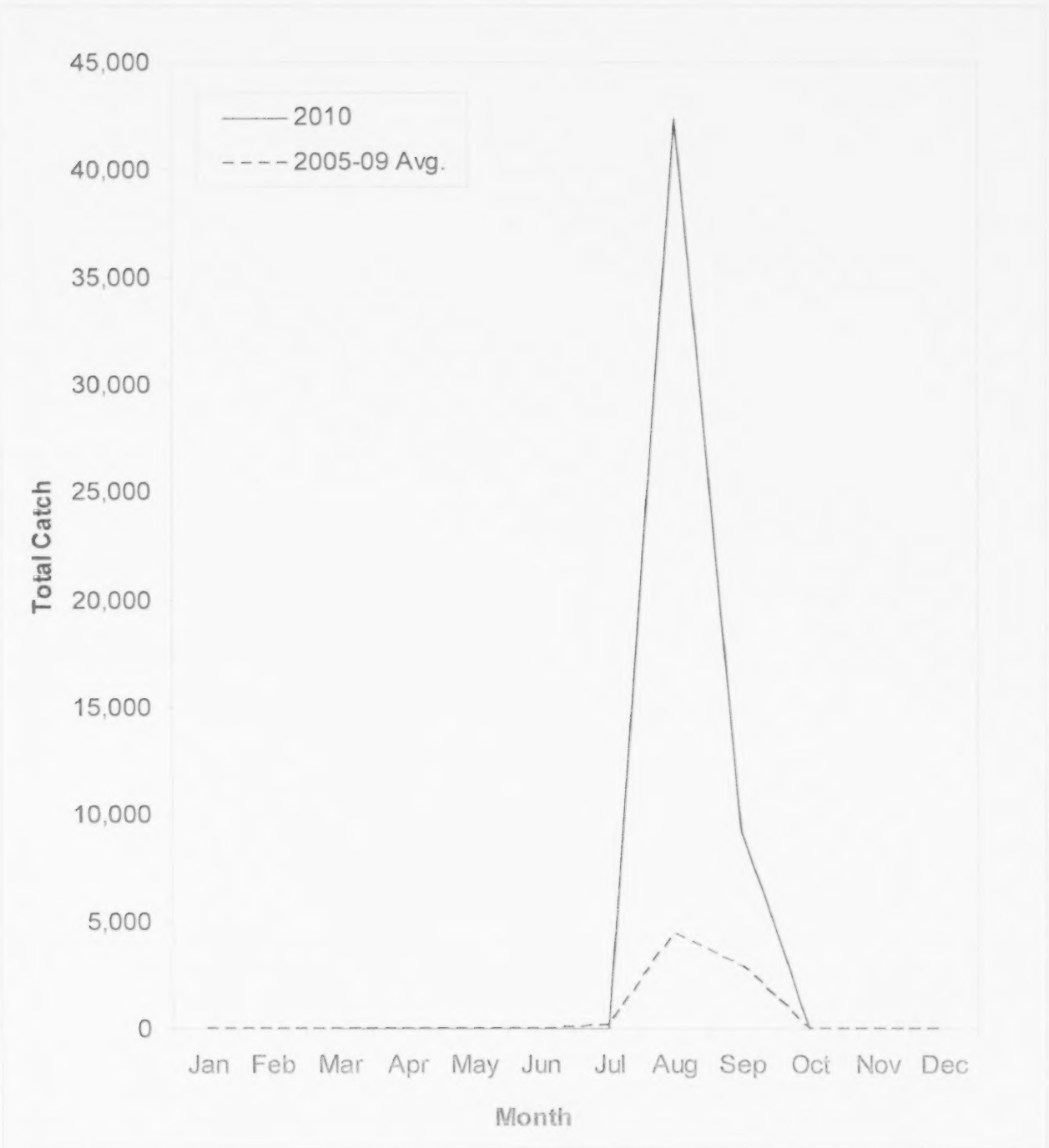


Figure 12. Monthly[1] estimated sockeye kept catches in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

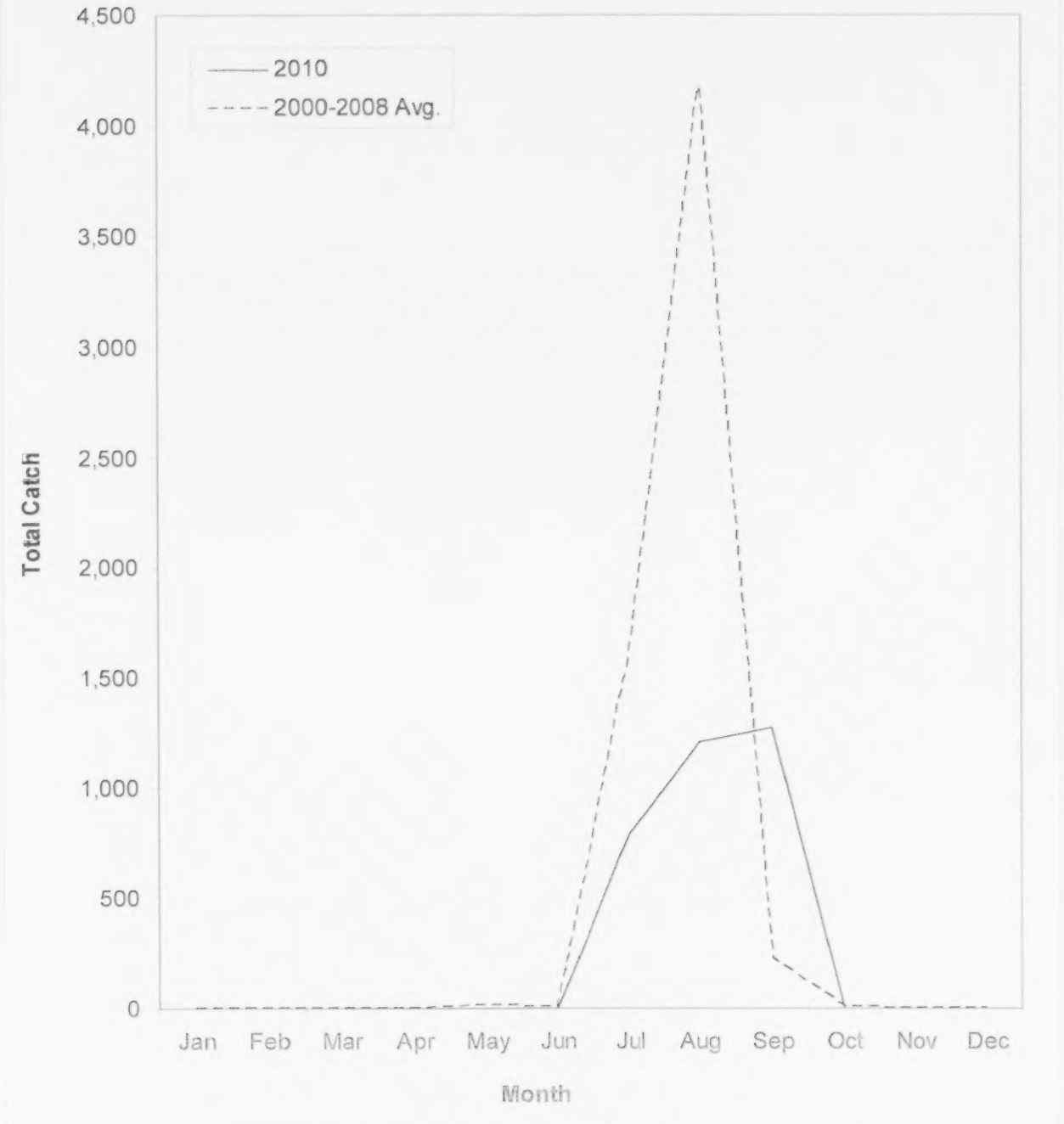


Figure 13. Monthly[1] estimated even year pink kept catches in the SG during 2010 and the five-cycle average for 2000 to 2008.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

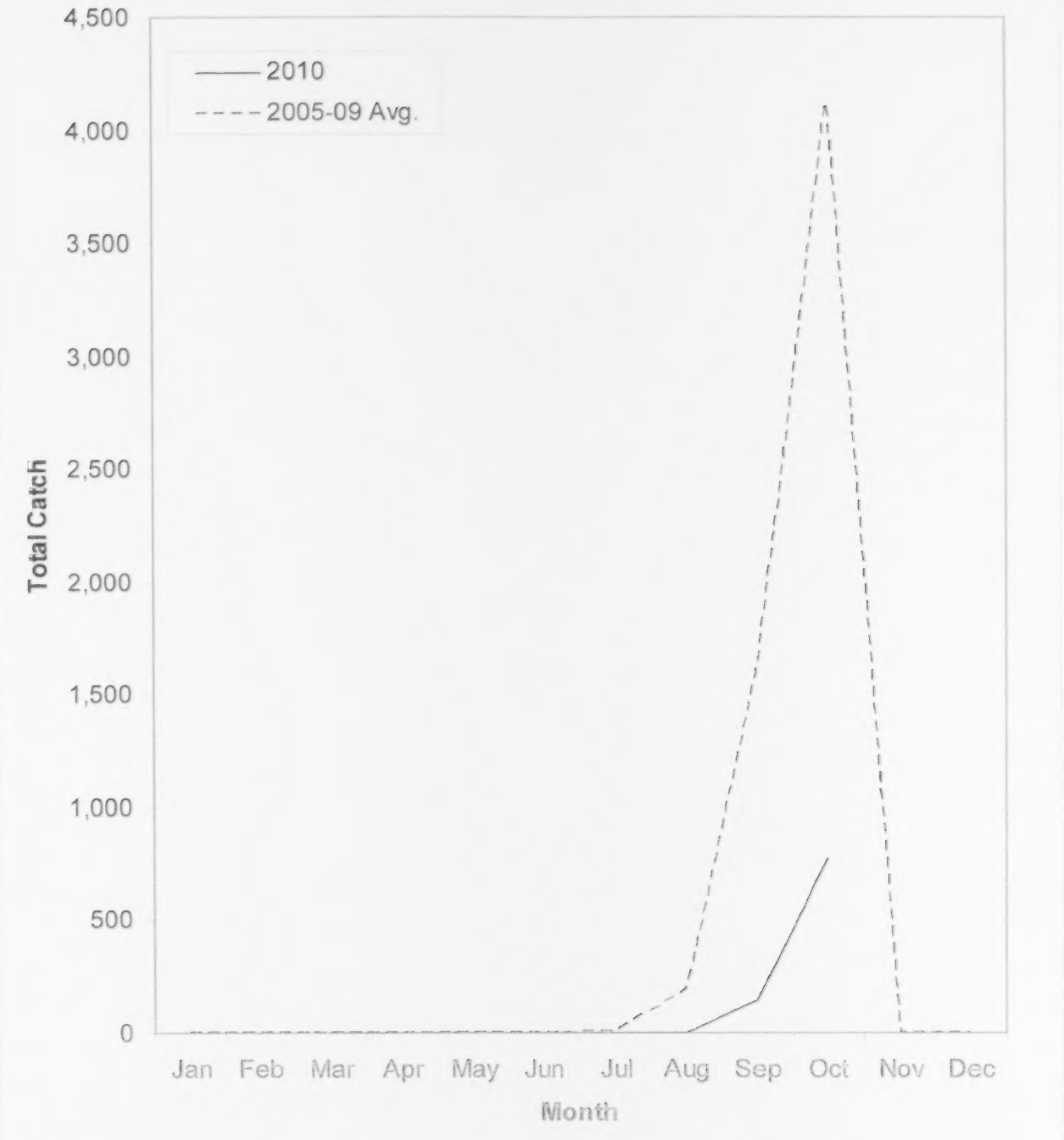
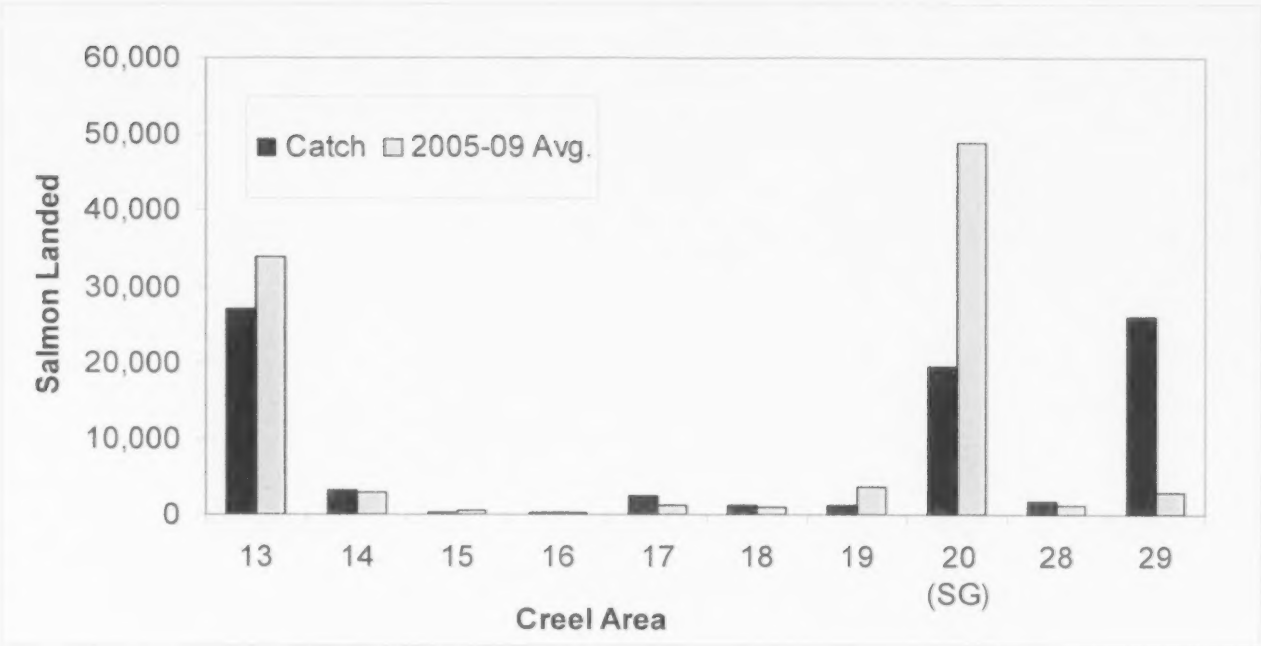


Figure 14. Monthly[1] estimated chum kept catches in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.



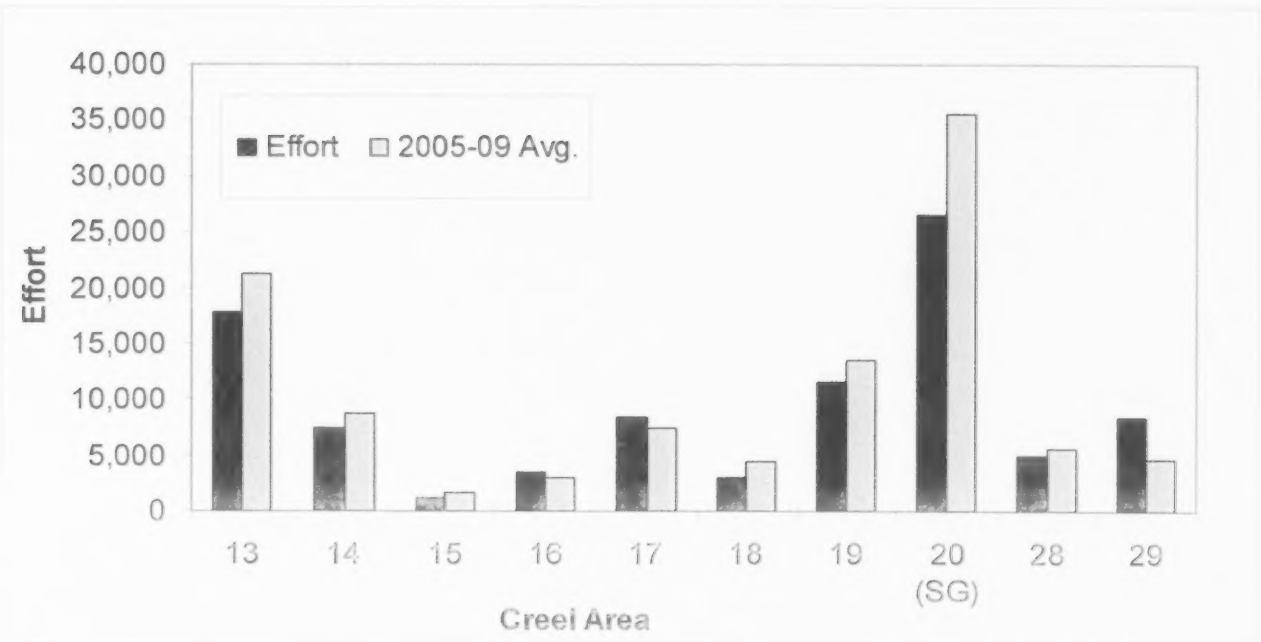


Figure 15. Total salmon landed and total fishing effort by creel area[1] in the SG during 2010 and the five-year average for 2005 to 2009.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

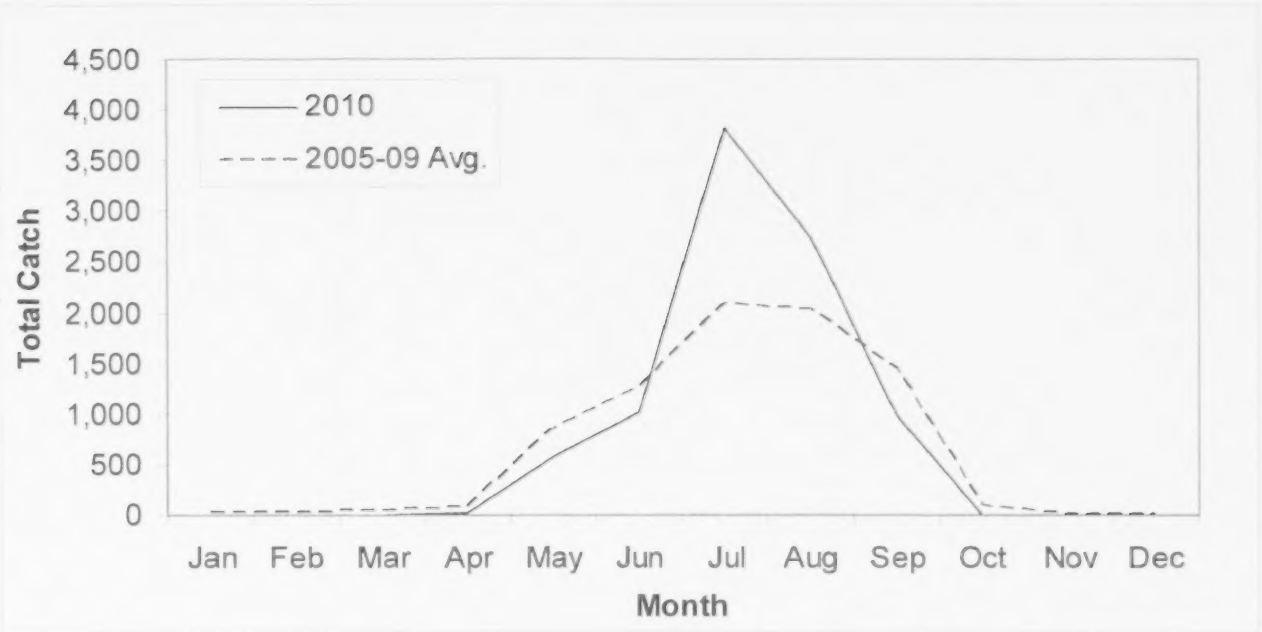


Figure 16. Monthly[1] estimated rockfish (all species) kept catches in the SG during 2010 and the five-year average for 2005 to 2009.

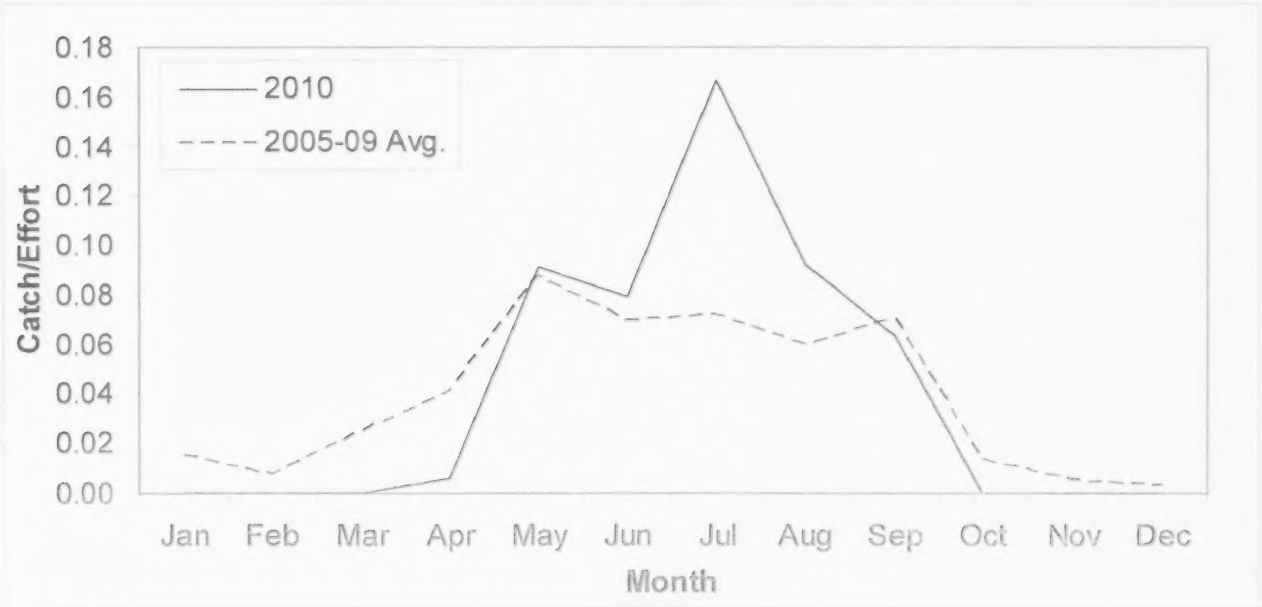


Figure 17. Monthly[1] estimated rockfish (all species) kept catch per boat trip in the SG during 2010 and the five-year average for 2005 to 2009.

[1] In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

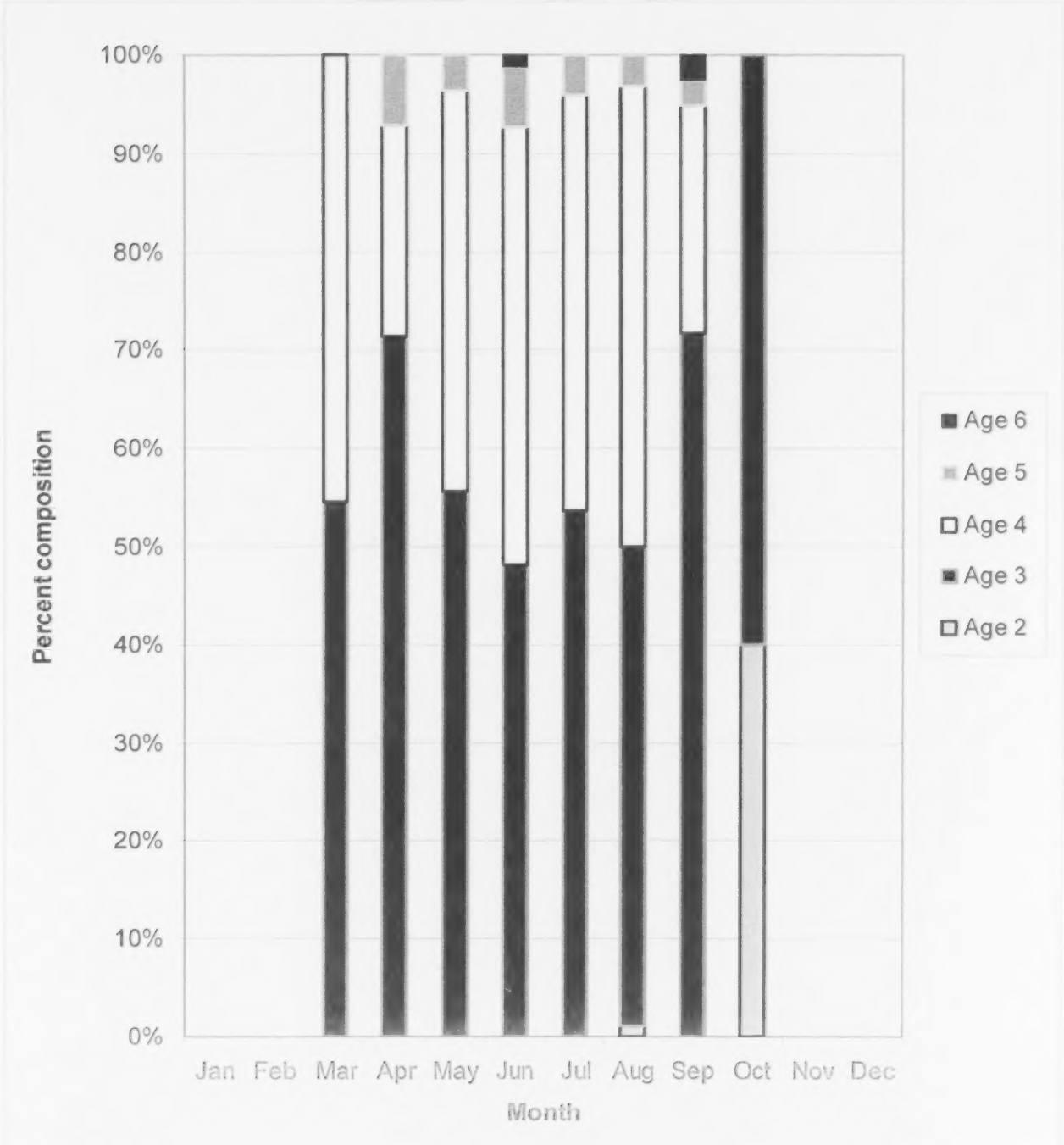


Figure 18. Monthly[1] percent age composition of chinook salmon sampled in the SG creel survey, 2010.

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

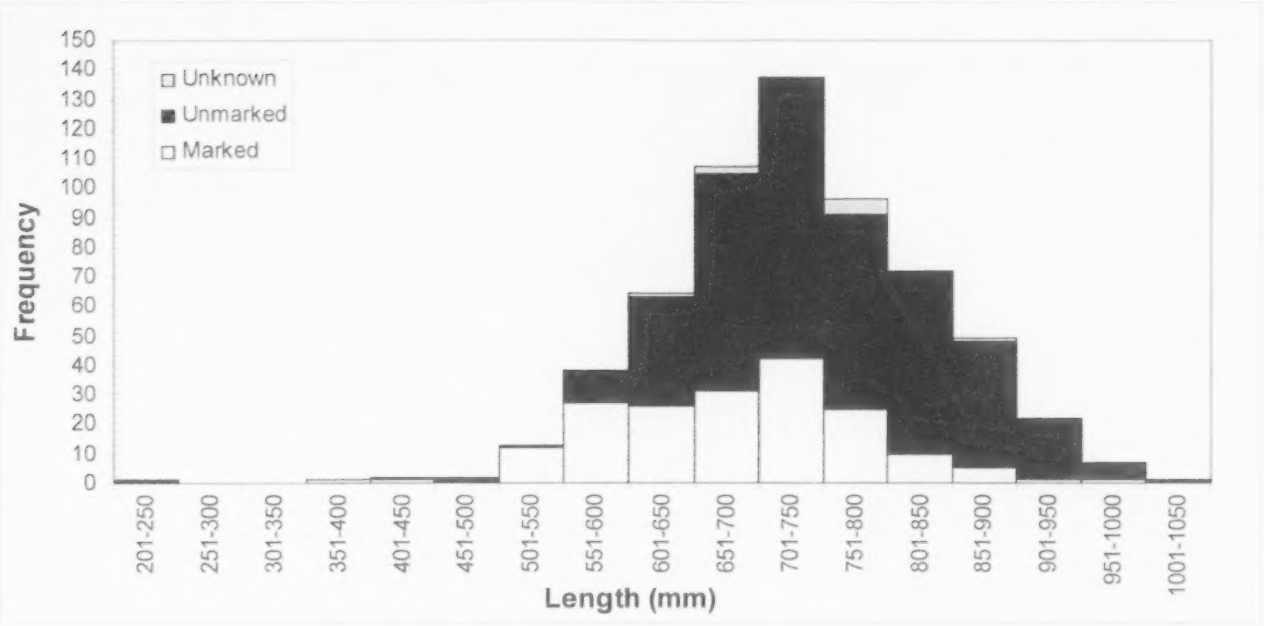


Figure 19. Length frequency distribution of chinook salmon sampled in the SG creel survey, 2010.

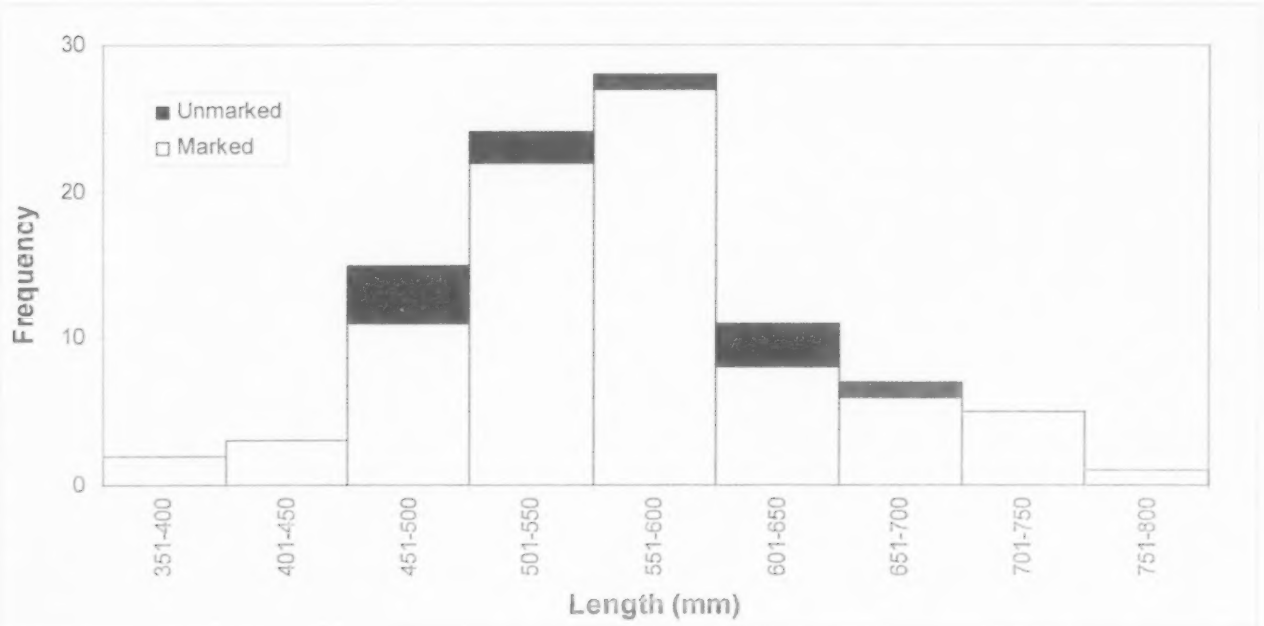


Figure 20. Length frequency distribution of coho salmon sampled in the SG creel survey, 2010.

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APPENDICES

Appendix A. Previous SG and northern Vancouver Island creel survey reports.

Shardlow, T.F., English, K.K., Hoyt, T., Gillespie, G.E., and Calvin, T.A. 1989. Strait of Georgia Creel Survey sport fishery statistics, 1983. Can. Manuscr. Rep. Fish. Aquat. Sci. 1872: 53 p.

Shardlow, T.F., and Collicutt, L.D. 1989 a. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1984. Can. Manuscr. Rep. Fish. Aquat. Sci. 2032: 61 p.

Shardlow, T.F., and Collicutt, L.D. 1989 b. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1985. Can. Manuscr. Rep. Fish. Aquat. Sci. 2033: 60 p.

Shardlow, T.F., and Collicutt, L.D. 1989 c. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1986. Can. Manuscr. Rep. Fish. Aquat. Sci. 2034: 61 p.

Shardlow, T.F., and Collicutt, L.D. 1989 d. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1987. Can. Manuscr. Rep. Fish. Aquat. Sci. 2035: 62 p.

Shardlow, T.F., and Collicutt, L.D. 1989 e. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1988. Can. Manuscr. Rep. Fish. Aquat. Sci. 2036: 63 p.

Collicutt, L.D., and Shardlow, T.F. 1990. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1989. Can. Manuscr. Rep. Fish. Aquat. Sci. 2087: 75 p.

Collicutt, L.D., and Shardlow, T.F. 1992. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1990. Can. Manuscr. Rep. Fish. Aquat. Sci. 2109: 76 p.

Collicutt, L.D., and Shardlow, T.F. 1995. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1991. Can. Manuscr. Rep. Fish. Aquat. Sci. 2137: 75 p.

Collicutt, L.D., Naito, B.G., Ryall, P., and Lapi, L. 1992. Northern Vancouver Island sport fishery creel survey statistics for salmon and groundfish, 1991. Can. Tech. Rep. Fish. Aquat. Sci. 1857: 121 p.

Collicutt, L. D., and Shardlow, T.F. 1994. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 1992. Can. Manuscr. Rep. Fish. Aquat. Sci. 2221: 75 p.

Collicutt, L.D., Shardlow, T.F., Smith, B.D., and Gillespie, G.E. 1994. Northern Vancouver Island sport fishery creel survey statistics for salmon and groundfish, 1992. Can. Tech. Rep. Fish. Aquat. Sci. 1973: 53 p.

Collicutt, L.D., Shardlow, T.F., Smith, B.D., and Gillespie, G.E. 1994. Northern Vancouver Island sport fishery creel survey statistics for salmon and groundfish, 1993. Can. Manuscr. Rep. Fish. Aquat. Sci. 1974: 53 p.

Hardie, D.C., Nagtegaal, D.A., and Nagy, L. 1999. Strait of Georgia sport fishery and Northern Vancouver Island creel survey statistics for salmon and groundfish, 1998. Can. Manuscr. Rep. Fish. Aquat. Sci. 2500: 92 p.

Hardie, D.C., Nagtegaal, D.A., and Nagy, L. 2001. Strait of Georgia sport fishery and Northern Vancouver Island creel survey statistics for salmon and groundfish, 1999. Can. Manuscr. Rep. Fish. Aquat. Sci. 2553: 111 p.

Hardie, D.C., Nagtegaal, D.A., Hein, K., and Sturhahn, J. 2002. Strait of Georgia sport fishery and Northern Vancouver Island creel survey statistics for salmon and groundfish, 2000. Can. Manuscr. Rep. Fish. Aquat. Sci. 2608: 112 p.

Hardie, D.C., Nagtegaal, D.A., Hein, K., and Sturhahn, J. 2003. Strait of Georgia and Northern Vancouver Island sport fishery creel survey statistics for salmon and groundfish, 2001. Can. Manuscr. Rep. Fish. Aquat. Sci. 2640: 107 p.

Zetterberg, P.R., Maher, J.M., and Watson, N.M. 2009. Strait of Georgia recreational fishery creel survey finfish data, 2002 to 2006. Can. Data Rep. Fish. Aquat. Sci. 1212: xix + 299 p.

Carter, E.W., and Zetterberg, P.R. 2010. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 2007. Can. Manuscr. Rep. Fish. Aquat. Sci. 2914: xiii + 125 p.

Zetterberg, P.R., and Carter, E.W. 2010. Strait of Georgia sport fishery creel survey statistics for salmon and groundfish, 2008. Can. Manuscr. Rep. Fish. Aquat. Sci. 2929: xiv + 123 p.

Zetterberg, P.R., Watson, N.M. and O'Brien, D.S. 2012. Strait of Georgia recreational fishery statistics for salmon and groundfish, 2009. Can. Manuscr. Rep. Fish. Aquat. Sci. 2979: xii + 104 p.

Appendix B. Strait of Georgia creel (SG) survey study area.

The 'Areas' delineated within the SG creel survey are the same as those statistical areas used previous to the current creel areas. The description of the area boundaries are those stated as salmon purse-seine fishing areas (Shardlow 1985). Catch and effort estimates were produced for creel areas 13 through 19, 20(SG), 28, and 29 and these areas are further divided for the purpose of the creel survey into creel sub-areas (Figure 3 a, b and c). Sub-areas being delineated by observed sport fishing patterns and concentrations.

The SG creel survey study area and landing site locations used in 2010 are shown in Figure 1. The study area for which these statistics apply includes those waters of JDF Strait and the SG bounded in the south by a line from Sheringham Pt. on Vancouver Island due south to an intersection with the International Boundary and along the International Boundary to the B.C, Mainland coast at Blaine (Boundary Bay) and in the northern by the following boundary lines:

1. A line in Johnstone Strait from Rock Point just west of Rock Bay to a point approximately 1 km west of the western-most point of Turn Island.
2. Includes the waters of Nodales Channel south of East Thurlow Island bound by a line from Johns Point on East Thurlow Island to Owen Point on the mainland coast.
3. Bute Inlet below a line from Lawrence Point across the inlet. This coincides with the intersection of creel areas 13-21 and 13-22.
4. A line from Raza Point on Raza Island northwest to the mainland coast off Calm Channel.
5. A line from the southern-most point of Raza Island to the western-most point of West Redonda Island.
6. A line from the eastern-most point of West Redonda Island from Marylebone Point to Horace Head on East Redonda Island.
7. Desolation Sound bound by a line from the southern-most point of East Redonda Island to Price Point on the mainland coast.
8. A line from Zephine Head on Gifford Peninsula south of Desolation Sound to Sarah Point on the Malaspina Peninsula.
9. A line from Elephant Point on the mainland coast northeast of Saint Vincent Bay to intersect with the peak of Mount Foley approximately 1.5 km south southwest of Lapan Creek.
10. A line starting at a point approximately 2.5 km north of Dacres Point on the mainland coast to a point approximately 1 km north of Treat Creek.
11. A line that coincides with the intersection of creel areas 16-9 and 16-11 from Egmont Point on the mainland coast to the Sechelt Peninsula.
12. A line that coincides with the intersection of the boundaries of creel areas 28-1 and 28-3 in Howe Sound.
13. A line from the southern-most point of Halkett Point on Gambier Island due east till it intersects with the mainland coast at Lions Bay.
14. A line directly under the Lions Gate Bridge from Prospect Point northeast to the West Vancouver shoreline.

Appendix C-1. Effort by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	952	119	474	67	-	-	-	-	1426	137
Apr	-	-	-	-	-	-	-	-	-	-	-	-	1915	361	813	242	-	-	-	-	2728	435
May	567	155	599	102	82	43	426	66	1087	127	346	67	1944	383	942	231	188	39	142	33	6324	514
Jun	1779	186	704	121	77	28	287	42	2439	235	488	62	2143	251	3900	638	582	150	407	74	12806	780
Jul	4642	306	1519	151	487	65	1194	108	2378	218	1055	97	2455	242	6670	1065	2003	189	538	70	22940	1193
Aug	6415	640	2808	237	441	66	1128	123	1939	239	601	77	1262	148	9244	2278	1256	242	4891	1011	29986	2616
Sep	3494	517	1758	193	66	23	498	106	610	145	421	101	821	74	4450	1070	932	335	2337	417	15388	1336
Oct	949	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	949	216
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	17848	936	7388	376	1153	108	3534	210	8453	444	2912	184	11492	663	26493	2828	4960	480	8315	1099	92547	3343

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-2. Chinook[2] kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	73	23	235	53	-	-	-	-	309	58
Apr	-	-	-	-	-	-	-	-	-	-	-	-	186	82	438	143	-	-	-	-	624	165
May	200	97	193	78	4	0	6	0	405	80	23	13	178	56	190	51	17	10	49	26	1264	169
Jun	1059	161	165	67	7	0	15	0	978	261	125	36	240	54	1484	257	0	0	4	0	4077	411
Jul	4322	742	485	68	68	32	49	18	469	136	91	31	270	92	1060	262	127	72	30	16	6969	812
Aug	2884	826	1165	207	65	17	125	48	262	81	41	22	66	36	2358	458	11	7	155	78	7130	976
Sep	490	135	447	102	27	23	64	35	54	24	6	5	36	16	1656	346	139	138	111	94	3030	423
Oct	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8956	1135	2455	261	171	43	259	62	2167	316	285	55	1049	153	7421	700	294	156	349	126	23404	1421

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]10 unidentified salmon were kept in the SG in 2010 and were not included.

Appendix C-3. Legal chinook[2] released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	7	5	27	11	-	-	-	-	33	12
Apr	-	-	-	-	-	-	-	-	-	-	-	-	95	61	362	224	-	-	-	-	458	232
May	17	13	1	0	2	0	0	0	44	20	0	0	53	26	61	36	0	0	0	0	178	50
Jun	120	80	17	12	0	0	3	0	369	229	51	18	90	44	228	85	0	0	0	0	878	261
Jul	69	0	94	40	38	24	19	13	0	0	103	46	31	31	48	44	0	0	3	3	405	85
Aug	118	0	103	63	89	55	79	60	52	26	13	10	14	15	262	130	0	0	5	0	735	169
Sep	2	0	0	0	2	0	0	0	0	0	16	13	7	6	435	282	0	0	109	106	571	302
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	326	81	215	75	131	60	101	61	464	231	183	52	297	87	1424	397	0	0	117	106	3258	502

[1] In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2] 2,222 unidentified salmon were released in the SG in 2010 and were not included.

Appendix C-4. Sub-legal chinook[2] released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	24	16	61	28	-	-	-	-	86	32
Apr	-	-	-	-	-	-	-	-	-	-	-	-	29	20	79	53	-	-	-	-	108	57
May	160	94	124	49	0	0	0	0	311	71	0	0	0	0	43	34	4	4	17	15	659	133
Jun	1114	211	227	93	0	0	12	7	1297	348	25	12	0	0	147	92	31	24	23	21	2875	429
Jul	1056	263	301	62	188	109	77	57	794	223	37	24	0	0	49	50	165	77	29	16	2695	384
Aug	830	293	1131	243	100	57	414	220	1720	364	3	3	4	4	701	224	24	14	74	52	5002	619
Sep	278	149	731	197	37	33	26	19	560	397	87	81	7	5	1012	294	70	51	63	41	2872	564
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3438	480	2514	336	325	127	529	229	4682	683	152	86	64	26	2093	391	295	97	206	73	14297	1027

[1] In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2] 2,222 unidentified salmon were released in the SG in 2010 and were not included.

Appendix C-5. Clipped Adipose (CA) and unclipped adipose (UA) coho[1] kept and released by month[3], effort, and mark type in the SG, 2010.

Month	Effort	SE	Coho CA Kept	SE	Coho UA Kept	SE	Coho Un-known Kept	SE	Monthly Coho Kept	Monthly Coho Kept SE	Coho CA Rel[2]	SE	Coho UA Rel[2]	SE	Coho Un-known Rel[2]	SE	Monthly Coho Rel[2]	Monthly Coho Rel[2] SE
Jan	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-
Mar	1426	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	2728	435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	6324	514	18	19	0	0	0	0	18	19	0	0	11	9	48	50	59	51
Jun	12806	780	311	107	94	42	0	0	405	115	160	63	625	347	481	147	1266	382
Jul	22940	1193	969	297	11	7	0	0	980	297	136	64	1283	300	559	162	1977	347
Aug	29986	2616	1004	242	121	43	0	0	1125	246	269	35	2187	426	1377	365	3833	562
Sep	15388	1336	732	240	191	89	0	0	923	256	267	23	2373	551	794	199	3434	586
Oct	949	216	30	18	2	0	0	0	32	18	16	0	104	42	0	0	120	42
Nov	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-
Total	92547	3343	3065	465	419	108	0	0	3484	478	848	99	6581	835	3260	472	10690	965

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.

[2]Rel = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-6. Clipped adipose (CA) and unclipped adipose (UA) coho[1] kept and released by creel area[3], effort, and species in the SG, 2010.

Creel Area	Effort	SE	Coho CA Kept	SE	Coho UA Kept	SE	Coho Un-known Kept	SE	Area Coho Kept	Area Coho Kept SE	Coho CA Rel[2]	SE	Coho UA Rel[2]	SE	Coho Un-known Rel[2]	SE	Area Coho Rel[2]	Area Coho Rel[2] SE
13	17848	936	896	257	62	0	0	0	958	257	541	27	3114	613	772	187	4428	642
14	7388	376	225	56	92	43	0	0	318	70	44	26	916	229	906	199	1866	305
15	1153	108	4	0	1	0	0	0	5	0	0	0	0	0	17	20	17	20
16	3534	210	0	0	2	0	0	0	2	0	3	0	62	42	12	11	77	44
17	8453	444	14	10	13	10	0	0	28	14	40	41	45	25	1095	346	1179	349
18	2912	184	0	0	0	0	0	0	0	0	0	0	13	7	6	5	18	9
19	11492	663	10	10	16	11	0	0	26	15	0	0	23	13	0	0	23	13
20 (SG)	26493	2828	726	175	232	98	0	0	958	201	54	42	2009	504	260	115	2323	519
28	4960	480	879	317	0	0	0	0	879	317	126	66	269	85	175	122	570	162
29	8315	1099	310	125	0	0	0	0	310	125	42	25	131	72	18	10	190	77
Total	92547	3343	3065	465	419	108	0	0	3484	478	848	99	6581	835	3260	472	10690	965

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.

[2]Rel = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-7. Clipped Adipose (CA) and unclipped adipose (UA) chinook[1] kept and released by month[3], effort, and mark type in the SG, 2010.

Month	Effort	SE	Chinook CA Kept	SE	Chinook UA Kept	SE	Chinook Un-known Kept	SE	Monthly Chinook Kept	Monthly Chinook Kept SE	Chinook CA Rel[2]	SE	Chinook UA Rel[2]	SE	Chinook Un-known Rel[2]	SE	Monthly Chinook Rel[2]	Monthly Chinook Rel[2] SE
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	1426	137	218	48	80	31	11	8	309	58	3	3	12	8	104	33	119	34
Apr	2728	435	402	133	222	97	0	0	624	165	180	190	255	131	131	61	566	239
May	6324	514	466	91	759	141	39	16	1264	169	6	0	139	47	692	134	837	142
Jun	12806	780	1621	235	2438	337	19	11	4077	411	122	45	302	112	3329	488	3753	503
Jul	22940	1193	621	136	6214	798	134	64	6969	812	8	0	168	46	2925	391	3101	393
Aug	29986	2616	1209	151	5830	963	92	44	7130	976	129	0	187	89	5421	635	5737	641
Sep	15388	1336	824	217	2164	362	42	34	3030	423	12	0	17	19	3414	639	3443	639
Oct	949	216	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	92547	3343	5361	415	17707	1356	336	87	23404	1421	460	196	1080	206	16016	1107	17556	1143

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.

[2]Rel = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-8. Clipped adipose (CA) and unclipped adipose (UA) chinook[1] kept and released by creel area[3], effort, and species in the SG, 2010.

PFMA	Effort	SE	Chinook CA Kept	SE	Chinook UA Kept	SE	Chinook Un-known Kept	SE	Area Chinook Kept	Area Chinook Kept SE	Chinook CA Rel[2]	SE	Chinook UA Rel[2]	SE	Chinook Un-known Rel[2]	SE	Area Chinook Rel[2]	Area Chinook Rel[2] SE
13	17848	936	867	55	8089	1134	0	0	8956	1135	164	0	162	81	3438	480	3764	487
14	7388	376	220	55	2214	255	21	11	2455	261	5	0	178	72	2547	336	2730	344
15	1153	108	60	22	110	37	0	0	171	43	11	0	0	0	446	141	457	141
16	3534	210	48	13	211	60	0	0	259	62	4	0	0	0	626	237	630	237
17	8453	444	417	109	1613	291	137	60	2167	316	0	0	23	16	5123	721	5146	721
18	2912	184	147	41	138	36	0	0	285	55	0	0	0	0	334	100	334	100
19	11492	663	552	102	491	113	5	5	1049	153	71	42	175	71	114	38	360	91
20 (SG)	26493	2828	2935	369	4312	591	174	62	7421	700	191	191	542	159	2784	498	3517	557
28	4960	480	38	39	206	140	0	0	294	156	0	0	0	0	295	97	295	97
29	8315	1099	27	14	322	126	0	0	349	126	14	0	0	0	309	129	323	129
Total	92547	3343	5361	415	17707	1356	336	87	23404	1421	460	196	1080	206	16016	1107	17556	1143

[1]10 unidentified salmon were kept and 2,222 unidentified salmon were released in the SG in 2010 and were not included.

[2]Rel = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-9. Sockeye[2] kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	12344	2333	156	61	0	0	0	0	0	0	970	244	95	37	10299	2251	427	192	18131	4544	42422	5591
Sep	2559	559	0	0	0	0	0	0	0	0	51	40	0	0	427	175	56	64	6093	2075	9186	2158
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	14903	2399	156	61	0	0	0	0	0	0	1021	247	95	37	10726	2258	483	203	24224	4995	51608	5993

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]10 unidentified salmon were kept in the SG in 2010 and were not included.

Appendix C-10. Sockeye[2] released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	100	63	0	0	0	0	0	0	0	0	0	0	0	0	29	25	0	0	0	0	129	68
Aug	42	42	0	0	0	0	0	0	0	0	26	20	0	0	700	467	0	0	948	735	1715	872
Sep	0	0	0	0	0	0	0	0	0	0	56	49	0	0	69	59	0	0	599	476	724	482
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	142	76	0	0	0	0	0	0	0	0	82	53	0	0	797	471	0	0	1547	876	2569	999

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]2,222 unidentified salmon were released in the SG in 2010 and were not included.

Appendix C-11. Pink[2] kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	639	216	34	22	0	0	0	0	12	12	0	0	0	0	107	73	0	0	0	0	792	229
Aug	551	215	274	196	0	0	0	0	147	58	0	0	18	18	220	71	0	0	0	0	1209	306
Sep	47	18	0	0	0	0	0	0	0	0	0	0	0	0	17	19	0	0	1212	1272	1276	1272
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1238	306	308	197	0	0	0	0	159	59	0	0	18	18	344	103	0	0	1212	1272	3277	1329

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]10 unidentified salmon were kept in the SG in 2010 and were not included.

Appendix C-12. Pink[2] released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	16	10	0	0	0	0	0	0	0	0	0	0	19	21	0	0	0	0	35	23
Aug	0	0	195	128	0	0	0	0	320	160	0	0	14	15	57	39	0	0	0	0	586	209
Sep	0	0	0	0	0	0	0	0	0	0	111	109	0	0	0	0	0	0	0	0	111	109
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	211	128	0	0	0	0	320	160	111	109	14	15	76	44	0	0	0	0	733	237

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]2,222 unidentified salmon were released in the SG in 2010 and were not included.

Appendix C-13. Chum[2] kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	124	66	0	0	0	0	0	0	0	0	0	0	0	0	21	23	0	0	0	0	145	70
Oct	775	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	775	215
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	899	225	0	0	0	0	0	0	0	0	0	0	0	0	21	23	0	0	0	0	920	226

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]10 unidentified salmon were kept in the SG in 2010 and were not included.

Appendix C-14. Chum[2] released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
Apr	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

[2]2,222 unidentified salmon were released in the SG in 2010 and were not included.

Appendix C-15. All salmon[1] kept by month[2] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	73	23	235	53	-	-	-	-	309	58
Apr	-	-	-	-	-	-	-	-	-	-	-	-	186	82	438	143	-	-	-	-	624	165
May	200	97	193	78	4	0	6	0	405	80	23	13	178	56	208	55	17	10	49	26	1282	170
Jun	1145	164	202	75	7	0	15	0	978	261	125	36	240	54	1680	267	60	71	30	26	4483	427
Jul	5322	792	607	78	68	32	50	18	480	136	91	31	280	92	1196	273	544	247	113	40	8751	895
Aug	16069	2490	1777	298	70	17	126	48	435	101	1011	245	187	56	13078	2300	696	215	18439	4546	51888	5689
Sep	3411	584	457	103	27	23	64	35	55	24	56	40	43	17	2645	422	339	233	7463	2436	14560	2554
Oct	808	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	808	216
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	26954	2693	3236	340	176	43	261	62	2353	322	1306	253	1187	159	19479	2375	1656	408	26095	5158	82703	6323

[1]All salmon includes unidentified salmonids

[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-16. All salmon[1] released by month[2] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	31	16	88	30	-	-	-	-	119	34
Apr	-	-	-	-	-	-	-	-	-	-	-	-	124	64	442	230	-	-	-	-	566	239
May	177	95	167	70	2	0	0	0	372	75	0	0	53	26	111	50	4	4	17	15	904	151
Jun	2003	417	520	151	0	0	15	7	1786	423	84	23	90	44	766	215	31	24	23	21	5317	652
Jul	2283	400	682	113	226	111	97	59	853	229	140	52	33	31	379	141	758	273	148	40	5599	584
Aug	1934	409	2336	366	189	80	618	236	3358	574	71	29	35	21	2912	624	229	88	1112	740	12793	1280
Sep	1818	378	1105	231	56	39	38	22	594	398	277	145	42	17	3581	673	70	51	772	489	8352	1036
Oct	120	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	42
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8334	809	4809	477	473	142	768	244	6964	851	572	158	409	93	8279	982	1091	292	2071	888	33769	1887

[1]All salmon includes unidentified salmonids

[2]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-17. Halibut kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	318	62	12	8	-	-	-	-	330	63
Apr	-	-	-	-	-	-	-	-	-	-	-	-	641	195	6	7	-	-	-	-	648	195
May	35	40	0	0	0	0	0	0	0	0	0	0	872	230	312	143	0	0	0	0	1219	274
Jun	1	0	19	17	0	0	0	0	0	0	0	0	807	197	261	128	0	0	0	0	1088	235
Jul	26	17	0	0	2	2	9	9	0	0	0	0	542	136	400	230	0	0	0	0	979	268
Aug	0	0	0	0	0	0	17	12	11	12	0	0	355	91	11	11	0	0	0	0	393	93
Sep	0	0	0	0	0	0	0	0	0	0	0	0	165	44	122	70	0	0	0	0	286	82
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	63	44	19	17	2	2	25	15	11	12	0	0	3700	403	1122	308	0	0	0	0	4943	510

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-18. Halibut released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	13	8	11	11	-	-	-	-	24	14
Apr	-	-	-	-	-	-	-	-	-	-	-	-	190	131	0	0	-	-	-	-	190	131
May	0	0	0	0	0	0	0	0	0	0	0	0	183	89	12	9	0	0	0	0	195	89
Jun	0	0	0	0	0	0	0	0	0	0	0	0	20	12	65	48	0	0	0	0	85	49
Jul	0	0	3	2	0	0	0	0	0	0	0	0	33	29	0	0	0	0	0	0	37	29
Aug	0	0	0	0	0	0	0	0	0	0	0	0	36	31	0	0	0	0	0	0	36	31
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	3	2	0	0	0	0	0	0	0	0	476	165	88	50	0	0	0	0	567	172

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-19. Lingcod kept by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	0	0	3	3	-	-	-	-	3	3
Apr	-	-	-	-	-	-	-	-	-	-	-	-	4	5	0	0	-	-	-	-	4	5
May	33	14	6	3	3	0	76	46	156	36	5	0	145	60	6	6	0	0	0	0	432	85
Jun	117	49	58	36	0	0	40	14	410	156	135	81	113	53	81	69	0	0	0	0	954	206
Jul	25	0	13	5	0	0	187	71	206	88	41	24	68	40	146	104	14	14	11	6	711	161
Aug	49	37	123	63	14	9	96	45	170	52	27	15	4	3	152	57	0	0	0	0	635	117
Sep	86	45	5	5	1	0	20	12	56	25	90	44	28	13	179	88	0	0	0	0	466	112
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	310	78	206	73	18	9	419	97	999	191	298	96	362	90	567	163	14	14	11	6	3204	319

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-20. Legal Lingcod released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	4	3	24	22	-	-	-	-	28	22
Apr	-	-	-	-	-	-	-	-	-	-	-	-	12	11	0	0	-	-	-	-	12	11
May	27	0	5	2	0	0	45	26	28	15	51	21	74	36	27	21	0	0	1	0	258	55
Jun	109	0	5	5	3	0	78	0	82	47	159	106	10	8	0	0	0	0	10	0	457	116
Jul	95	0	68	17	2	0	213	75	37	29	77	24	31	17	0	0	43	34	28	7	594	94
Aug	63	0	107	78	0	0	43	0	27	18	14	4	11	9	0	0	1	1	72	34	338	88
Sep	17	0	29	24	11	0	32	0	4	5	36	0	15	13	0	0	0	0	66	0	210	28
Oct	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	311	0	213	84	16	0	411	80	178	60	338	110	157	45	51	30	44	34	177	34	1897	185

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix C-21. Sub-legal lingcod released by month[1] and creel area in the SG, 2010.

Month	Creel Area																				Est Total	SE Total
	13		14		15		16		17		18		19		20 (SG)		28		29			
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE		
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	96	36	231	75	-	-	-	-	328	83
Apr	-	-	-	-	-	-	-	-	-	-	-	-	118	45	508	291	-	-	-	-	626	294
May	9	10	58	28	0	0	642	258	916	326	236	130	1392	389	714	259	0	0	0	0	3969	640
Jun	237	79	278	107	0	0	372	127	2868	1601	321	67	1533	556	3115	700	0	0	0	0	8723	1844
Jul	488	256	224	56	0	0	2056	647	1336	372	579	163	2525	845	4111	932	42	34	8	7	11368	1496
Aug	59	43	1247	795	359	152	3534	1004	1324	391	63	23	1004	354	3535	1166	0	0	0	0	11126	1817
Sep	371	174	33	18	0	0	164	63	280	112	224	155	244	69	1308	490	0	0	0	0	2624	562
Oct	12	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	13
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1177	323	1840	805	359	152	6767	1229	6725	1724	1422	270	6913	1144	13523	1765	42	34	8	7	38776	3124

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix D-1. Kept and released catch per unit effort (CPUE) for salmon, lingcod, and halibut by month[3] in the SG creel survey, 2010.

Month	Kept								Released							
	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Kept	Halibut	Lingcod	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Rel.[2]	Halibut	Lingcod
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	0.22	0.00	0.00	0.00	0.00	0.22	0.23	0.00	0.08	0.00	0.00	0.00	0.00	0.08	0.02	0.25
Apr	0.23	0.00	0.00	0.00	0.00	0.23	0.24	0.00	0.21	0.00	0.00	0.00	0.00	0.21	0.07	0.23
May	0.20	0.00	0.00	0.00	0.00	0.20	0.19	0.07	0.13	0.01	0.00	0.00	0.00	0.14	0.03	0.66
Jun	0.30	0.03	0.00	0.00	0.00	0.33	0.09	0.07	0.30	0.10	0.00	0.00	0.00	0.39	0.01	0.71
Jul	0.28	0.04	0.00	0.04	0.00	0.35	0.04	0.03	0.14	0.08	0.01	0.00	0.00	0.23	0.00	0.52
Aug	0.23	0.04	1.44	0.04	0.00	1.74	0.01	0.02	0.19	0.12	0.06	0.02	0.00	0.39	0.00	0.38
Sep	0.19	0.06	0.61	0.08	0.01	0.96	0.02	0.03	0.23	0.21	0.05	0.01	0.00	0.49	0.00	0.18
Oct	0.00	0.03	0.00	0.00	0.83	0.87	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.01
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.24	0.04	0.57	0.04	0.01	0.89	0.05	0.03	0.19	0.11	0.03	0.01	0.00	0.34	0.01	0.44

[1]Total includes species listed in table only.

[2]Rel. = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix D-2. Kept and released catch per unit effort (CPUE) for salmon, lingcod, and halibut by month for logbook reported catch used in the SG estimates, 2010.

Month	Kept								Released							
	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Kept	Halibut	Lingcod	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Rel.[2]	Halibut	Lingcod
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.27	0.13	0.00	0.00	0.00	0.00	0.13	0.00	1.27
Jun	1.10	0.13	0.00	0.00	0.00	1.24	0.00	0.12	0.18	0.25	0.00	0.00	0.00	0.43	0.00	0.88
Jul	1.43	0.02	0.00	0.00	0.00	1.46	0.01	0.08	0.14	0.17	0.00	0.00	0.00	0.31	0.00	0.46
Aug	0.89	0.05	0.00	0.00	0.00	0.94	0.00	0.03	0.24	0.41	0.00	0.00	0.00	0.65	0.00	0.30
Sep	0.37	0.10	0.00	0.00	0.00	0.47	0.00	0.06	0.04	0.91	0.00	0.00	0.00	0.95	0.00	0.57
Oct	0.05	0.10	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.80	0.00	0.00
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.99	0.06	0.00	0.00	0.00	1.05	0.00	0.07	0.16	0.38	0.00	0.00	0.00	0.54	0.00	0.51

[1]Total includes species listed in table only.

[2]Rel. = released.

Appendix D-3. Kept and released CPUE for all salmon, all groundfish, and all rockfish by month[1] in the SG creel survey, 2010.

Month	Kept			Released		
	Salmon	Groundfish	Rockfish	Salmon	Groundfish	Rockfish
Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	0.22	0.32	0.00	0.08	0.68	0.07
Apr	0.23	0.27	0.01	0.21	0.64	0.13
May	0.20	0.35	0.09	0.14	1.03	0.53
Jun	0.33	0.27	0.08	0.41	1.08	0.32
Jul	0.36	0.23	0.17	0.24	1.11	0.40
Aug	1.74	0.16	0.09	0.42	0.61	0.22
Sep	0.96	0.14	0.06	0.54	0.33	0.14
Oct	0.87	0.00	0.00	0.11	0.01	0.03
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
Total	0.89	0.21	0.10	0.36	0.78	0.28

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix D-4. Kept and released CPUE for all salmon, all groundfish, and all rockfish by month for logbook reported catch used in the SG estimates, 2010.

Month	Kept			Released		
	Salmon	Groundfish	Rockfish	Salmon	Groundfish	Rockfish
Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00
May	0.66	0.77	0.07	0.13	2.07	0.45
Jun	1.24	0.32	0.07	0.43	1.72	0.41
Jul	1.46	0.24	0.10	0.31	0.86	0.17
Aug	0.94	0.11	0.07	0.65	0.43	0.12
Sep	0.47	0.22	0.04	0.95	0.97	0.07
Oct	0.15	0.00	0.00	0.80	0.00	0.05
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
Total	1.05	0.22	0.07	0.54	0.90	0.18

Appendix D-5. Kept and released CPUE for salmon, lingcod, and halibut by creel area[3] in the SG creel survey, 2010.

Creel Area	Kept								Released							
	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Kept	Halibut	Lingcod	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Rel.[2]	Halibut	Lingcod
13	0.45	0.05	0.91	0.08	0.05	1.54	0.00	0.02	0.21	0.23	0.01	0.00	0.00	0.45	0.00	0.07
14	0.33	0.04	0.02	0.04	0.00	0.44	0.00	0.03	0.37	0.25	0.00	0.03	0.00	0.65	0.00	0.27
15	0.12	0.00	0.00	0.00	0.00	0.12	0.00	0.01	0.40	0.01	0.00	0.00	0.00	0.41	0.00	0.32
16	0.07	0.00	0.00	0.00	0.00	0.07	0.01	0.12	0.18	0.02	0.00	0.00	0.00	0.21	0.00	2.05
17	0.26	0.00	0.00	0.02	0.00	0.28	0.00	0.12	0.61	0.14	0.00	0.04	0.00	0.79	0.00	0.82
18	0.10	0.00	0.35	0.00	0.00	0.45	0.00	0.09	0.12	0.01	0.03	0.04	0.00	0.19	0.00	0.57
19	0.09	0.00	0.01	0.00	0.00	0.10	0.32	0.03	0.03	0.00	0.00	0.00	0.00	0.03	0.04	0.62
20 (SG)	0.28	0.04	0.40	0.01	0.00	0.73	0.04	0.02	0.13	0.09	0.03	0.00	0.00	0.25	0.00	0.51
28	0.06	0.18	0.10	0.00	0.00	0.33	0.00	0.00	0.06	0.12	0.00	0.00	0.00	0.17	0.00	0.02
29	0.04	0.04	2.93	0.15	0.00	3.15	0.00	0.00	0.04	0.02	0.19	0.00	0.00	0.25	0.00	0.01
Total	0.24	0.04	0.57	0.04	0.01	0.89	0.05	0.03	0.19	0.11	0.03	0.01	0.00	0.34	0.01	0.44

[1]Total includes species listed in table only.

[2]Rel. = released.

[3]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix D-6. Kept and released CPUE for salmon, lingcod, and halibut by creel area for logbook reported catch used in the SG estimates, 2010.

Creel Area	Kept								Released							
	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Kept	Halibut	Lingcod	Chinook	Coho	Sockeye	Pink	Chum	Total Salmon[1] Rel.[2]	Halibut	Lingcod
13	1.09	0.07	0.00	0.00	0.00	1.16	0.00	0.04	0.17	0.45	0.00	0.00	0.00	0.62	0.00	0.22
14	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.10	0.16	0.13	0.00	0.00	0.00	0.29	0.00	1.19
15	1.64	0.20	0.00	0.00	0.00	1.84	0.00	0.16	0.44	0.00	0.00	0.00	0.00	0.44	0.00	0.64
16	0.26	0.01	0.00	0.00	0.00	0.27	0.00	0.16	0.03	0.02	0.00	0.00	0.00	0.05	0.00	1.65
17	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.07	0.00	0.00	0.00	0.00	0.07	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.07
19	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 (SG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
29	0.28	0.00	0.00	0.00	0.00	0.28	0.00	0.13	0.30	0.04	0.00	0.00	0.00	0.35	0.00	2.98
Total	0.99	0.06	0.00	0.00	0.00	1.05	0.00	0.07	0.16	0.38	0.00	0.00	0.00	0.54	0.00	0.51

[1]Total includes species listed in table only.

[2]Rel. = released.

Appendix D-7. Kept and released CPUE for all salmon, all groundfish, and all rockfish by creel area[1] in the SG creel survey, 2010.

Creel Area	Kept			Released		
	Salmon	Groundfish	Rockfish	Salmon	Groundfish	Rockfish
13	1.54	0.06	0.02	0.45	0.07	0.04
14	0.44	0.17	0.05	0.65	0.60	0.10
15	0.12	0.01	0.24	0.41	0.38	0.17
16	0.07	0.35	0.44	0.22	2.55	1.27
17	0.28	0.19	0.17	0.82	1.22	0.73
18	0.45	0.59	0.25	0.20	1.65	1.09
19	0.10	0.47	0.10	0.04	1.94	0.21
20 (SG)	0.74	0.20	0.09	0.31	0.68	0.24
28	0.33	0.13	0.13	0.22	0.08	0.25
29	3.15	0.07	0.01	0.25	0.04	0.02
Total	0.89	0.21	0.10	0.36	0.78	0.28

[1]In 2010 creel area 13 was surveyed May to October and creel area 19 and 20(SG) were surveyed March to September. All other areas (creel area 14 to 18, 28 and 29) were surveyed between May and September.

Appendix D-8. Kept and released CPUE for all salmon, all groundfish, and all rockfish by creel area for logbook reported catch used in the SG estimates, 2010.

Creel Area	Kept			Released		
	Salmon	Groundfish	Rockfish	Salmon	Groundfish	Rockfish
13	1.16	0.11	0.03	0.62	0.52	0.09
14	1.00	0.16	0.13	0.29	1.52	0.90
15	1.84	0.16	0.04	0.44	0.64	0.20
16	0.27	0.30	0.38	0.05	2.11	0.68
17	1.00	0.00	0.00	0.00	0.00	0.50
18	0.07	11.07	0.73	0.00	15.80	1.20
19	2.00	0.00	0.00	0.00	0.00	0.00
20 (SG)	0.00	0.00	0.00	0.00	0.00	0.00
28	0.33	0.00	0.00	0.00	0.22	0.00
29	0.28	0.22	0.13	0.35	3.72	0.50
Total	1.05	0.22	0.07	0.54	0.90	0.18

Appendix E. Taxonomic reference of species reported in 2010.

*Listed alphabetically by common name.

Black rockfish	*Sebastes melanops*
Brown Irish lord	*Hemilepidotus spinosus*
Cabezon	*Scorpaenichthys marmoratus*
Canary rockfish	*Sebastes pinniger*
China rockfish	*Sebastes nebulosus*
Chinook salmon	*Oncorhynchus tshawytscha*
Chum salmon	*Oncorhynchus keta*
Coho salmon	*Oncorhynchus kisutch*
Copper rockfish	*Sebastes caurinus*
Dogfish (spiny dogfish)	*Squalus acanthias*
Flatfishes	*Heterosomata, Plueronectiforme spp.*
Flounder	*Bothidae, Pleuronectidae spp.*
Greenling	*Hexagrammidae spp.*
Hake (Pacific)	*Merluccius productus*
Halibut (Pacific)	*Hippoglossus stenolepis*
Herring (Pacific)	*Clupea harengus pallasi*
Kelp greenling	*Hexagrammos decagrammus*
Lingcod	*Ophiodon elongatus*
Mackerel (chub)	*Scomber japonicus*
Not identified salmonids	*Salmonidae spp.*
Other groundfish	Other species in class Chondricthyes and Osteichthyes
Other rockfish	*Sebastes, Sebastodes, Sebastolobus spp.*
Other sole	*Bothidae, Pleuronectidae spp.*
Pacific cod	*Gadus macrocephalus*
Pacific sandab	*Citharichthys sordidus*
Pink salmon	*Oncorhynchus gorbuscha*
Quillback rockfish	*Sebastes maliger*
Ratfish	*Hydrolagus colliei*
Red Irish lord	*Hemilepidotus hemilepidotus*
Rock sole	*Lepidopsetta bilineata*
Sculpins	*Cottidae spp.*
Skates	*Rajidae spp.*
Sockeye salmon	*Oncorhynchus nerka*
Starry flounder	*Platichthys stellatus, Inopsetta ischyra*
Tiger rockfish	*Sebastes nigrocinctus*
Vermillion rockfish	*Sebastes miniatus*
Yelloweye rockfish	*Sebastes rubberimus*
Yellowtail rockfish	*Sebastes flavidus*

Appendix F. Tidal effort statistics and recreational estimates of chinook and coho kept for the SG, 1960 to 1985.

Year	Effort[1] (boat trips)	Kept	
		Chinook	Coho
1960	189,150	83,000	238,000
1961	199,935	63,000	152,000
1962	205,547	86,000	167,000
1963	247,590	65,000	199,000
1964	198,120	51,000	182,000
1965	250,020	53,000	175,000
1966	259,100	80,000	249,000
1967	254,500	115,000	200,000
1968	265,030	150,000	250,000
1969	281,475	185,000	200,000
1970	306,255	220,000	500,000
1971	341,123	255,000	800,000
1972	300,349	287,000	335,000
1973	293,141	272,000	373,000
1974	443,441	269,000	772,000
1975	334,490	398,000	454,000
1976	340,729	490,000	415,000
1977	363,350	372,000	682,000
1978	369,035	500,000	1,103,000
1979	404,710	350,000	708,735
1980	510,400	204,100	393,500
1981	494,604	197,239	317,091
1982	559,385	124,390	411,686
1983	435,335	139,982	344,664
1984	562,113	315,913	401,628
1985	549,986	196,888	670,753

[1]Effort prior to 1980 (the start of the creel survey) may not represent boat trips.

Appendix G. Species and PFMA specific tidal regulations for major finfish in the SG, 2010.

General regulations which affected the 2010 SG recreational fishery for major finfish species are summarized below (these regulations do not include tidal and non-tidal portions of the Fraser River):

- All coho, sockeye, pink and chum must measure 30 cm or more (tip of nose to fork of tail) and the daily limit was four (4), possession eight (8). There were no annual limit on these species.
- The minimum size limit for chinook was 62 cm. Daily limit of chinook was two (2), possession of four (4). In a portion of PFMA 19/20 (Cadboro Bay to Sheringham Pt.), the minimum size limit for chinook was 45 cm.
- The annual limit for chinook coast wide was 30. The annual limit for PFMAs 13 to 19 (north of Cadboro Point) is 15 chinook. The annual limit for PFMAs 19 and 20 (south of Cadboro Point to Sheringham Point) was 20 chinook.
- Conservation measures were implemented again in specific PFMAs to protect certain chinook stocks in 2009 including early timed Fraser River and lower SG.
- Two (2) adipose marked coho per day could be retained from 01 June to 31 December.
- The recreational fishery for Fraser River sockeye in South Coast marine waters was open to sockeye retention from 05 August until 31 December.
- The recreational rockfish and lingcod fisheries in the SG were operated concurrently and were open from 01 May to 30 September.
- The recreational halibut fishery was open from 01 February to 18 October.

Below is a comprehensive list of the major finfish species and area regulations with exemptions and specifics to the above list. For a complete list of regulations, please see the following website: <http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=fishery_search&lang=en&ID=recreational> (Accessed Aug 21, 2012).

- Anglers are reminded that there are 164 Rockfish Conservation Areas (RCA's) coast wide and that fin fishing is prohibited in these areas. Maps and descriptions of RCA's are available on the DFO website and at local DFO offices.

- Lingcod:

  Effective 00:01 hrs May 1, 2010 to 23:59 hrs September 30, 2010, fishing for lingcod will be open in the following areas:
  - Areas 13 to 19
  - Subareas 20-5 to 20-7 and 29-5

  Daily limit: one (1)

Size limit: 65cm (Note: this is a change from 2009)
Annual limit: ten (10)

- **Rockfish (Rockfish and yelloweye rockfish in aggregate):**

Effective 00:01 May 1, 2010 to 23:59 hours September 30, 2010 fishing for rockfish will open in the following areas:

- Areas: 13 to 19, 20-5 to 20-7, and 29-5.

Daily limit: one (1)
No size limit or annual is in effect.

- **Halibut:**

The department has held initial consultations with the Sport Fishing Advisory Board (SFAB) on halibut management options for the 2010 season.
As an interim measure DFO will open the fishery February 1 at a daily limit of one (1) and a possession limit of two (2). When Canada's allocation under the International Pacific Halibut Commission (IHPC) is known after the IPHC's annual meeting in late January, DFO will convene meetings with the SFAB to complete management measures for the 2010 season. These measures will be announced as soon as possible.

Coastwide:

Effective at 00:01 hours February 1, 2010 fishing for halibut will be opened coastwide. The daily limit at the start of the season is one (1) per day with a possession limit of two (2).

Throughout the 2010 recreational halibut fishing season, the Department in conjunction with the SFAB Halibut Working Group have reviewed in-season monthly catch estimates. Catch information indicates that the recreational share of the Total Allowable Catch has been reached. Therefore, recreational fishing for halibut will close effective 23:59 hrs October 18, 2010 for the balance of the year.

- **Coho:**

Coho non retention is in effect in all areas from Jan 01 - May 31. Coho minimum size limit is 30 cm.

June 1 to December 31 - In Areas 13 to 29 you may retain 2 hatchery marked coho per day unless otherwise specified below:

Subareas 13-20, 13-21, a portion of 13-22 (East Side of Stuart Island and a portion of Bute Inlet):

Effective 00:01 hrs August 1, 2010 until 23:59 hrs September 15, 2010 in Subarea 13-20, 13-21 and that portion of Subarea 13-22 described as those waters in Bute Inlet from the RCA boundary sign at Littleton Point across to the opposite shore at 50° 49.9' north latitude and 124° 51.63' west longitude, you may retain two (2) coho per day, one (1) of which may be wild (unmarked).

Portion of subarea 14-11 (Baynes Sound):

Effective 00:01 hrs September 1, 2010 until 23:59 hrs December 31, 2010 in that portion of Subarea 14-11 Baynes Sound inside a line from the Cape Lazo Light, then to the P-54 Bell Buoy on Comox Bar, then to Longbeak Point, then to the mouth of Hart (Washer) Creek, you may retain two (2) coho per day, one (1) of which may be wild (unmarked).

Portion of subarea 15-1 (Lang Creek):

Effective 00:01 hrs August 15, 2010 until 23:59 hrs October 15, 2010 in that portion of Subarea 15-1 east of a line from Albion Point (locally known as Black Point) to Scotchfir Point, you may retain (2) coho per day (hatchery marked or unmarked).

Subarea 16-5 and portion of subarea 16-6 (Sechelt Inlet and Porpoise Bay):

Effective 00:01 hrs June 1, 2010 until 23:59 hrs December 31, 2010 in Subarea 16-5 and a portion of Subarea 16-6 (Sechelt Inlet and Porpoise Bay), southerly of a line from Nine Mile Point to boundary sign on the opposite shore you may retain four (4) coho per day (hatchery marked or unmarked).

Portion of subarea 18-8 (Separation Point):

Effective 00:01 hrs November 1, 2010 until 23:59 hrs December 31, 2010 in that portion of Subarea 18-8, inside of a line between Separation Point and Cherry Point, you may retain two (2) coho per day (hatchery marked or unmarked).

Area 19:

Effective 00:01 hrs October 1, 2010 until 23:59 hrs December 31, 2010 in Area 19, you may retain two (2) Coho per day, one (1) of which may be wild (unmarked).

Subareas 20-5 to 20-7:

Effective 00:01 hrs October 1, 2010 until 23:59 hrs December 31, 2010 in Subareas 20-5 to 20-7, you may retain four (4) coho per day, one (1) of which may be wild (unmarked).

Subareas 28-1 to 28-7 and 28-9:

Effective immediately (May 31) until 23:59 hrs December 31, 2010, you may retain two (2) hatchery marked coho per day.

Subareas 28-11 to 28-14 (Burrard Inlet East):

Effective immediately (May31) until 23:59 hrs September 30, 2010, you may retain two (2) hatchery marked coho per day.

Effective 00:01 hrs October 1, 2010 until 23:59 hrs March 31, 2010, in Subareas 28-11 to 28-14 (Burrard Inlet east of Second Narrows/Iron Workers Memorial Bridge, Indian Arm and Port Moody Arm), YOU MAY NOT RETAIN COHO.

Portion of Subarea 29-1 (Chapman Creek):

Effective 00:01 hrs September 15, 2010 until 23:59 hrs December 31, 2010 in that portion of Subarea 29-1 in front of Chapman Creek of Davis Bay and Trail Bay, inside a half mile ribbon boundary (1/2 mile offshore), commencing from one half mile true south of the western boundary of Snickett Park (49° 25.875' N and 123° 42.824' W to one half mile true south of the marker at the entrance to the Port Stalashin Marina (49° 25.875' N 123° 42.824' W), you may retain (2) coho per day (hatchery marked or unmarked).

Portion of Subarea 29-3:

Effective immediately (May 31) until 23:59 hrs December 31, 2010 in that portion of Subarea 29-3 easterly of a line from Gower Point to the Tango light Buoy, then to the northern tip of Lulu Island, you may retain two (2) hatchery marked coho per day.

- **Chinook:**

The Department is implementing measures to reduce fishery exploitation rates on Fraser River chinook stocks of concern in commercial, recreational, and First nation fisheries. These Fraser chinook stocks begin returning through Victoria area in March. Management measures for the recreational fishery in portions of Areas 19 and 20 are outlined below. SFAB representatives have been consulted on these measures.

> Effective 00:01 hrs Mon, March 01 and until 23:59 hrs Fri, May 21, 2010, additional recreational fishery restrictions on chinook salmon will be in effect in Subareas 19-1 to 19-4 and Subarea 20-5 (those waters near Victoria between Cadboro Pt. to Sheringham Pt.). During this time period and in this area the daily limit is two (2) chinook salmon per day which may be wild or hatchery marked between the size limit of 45 cm and 67 cm or hatchery marked only chinook over 67 cm in length. Additional management measures to protect Fraser River chinook populations may be considered as part of the 2010 South Coast Integrated Fisheries Management Plan.

The Department is implementing measures to protect and conserve Fraser River spring chinook . Additional management measures are required for commercial, recreational, and First Nation fisheries to reduce fishery exploitation rates on these chinook stocks. Additional management measures are required for the recreational fishery in Subareas 29-6, 29-7, 29-9, and 29-10.

> Effective 00:01 hrs Saturday May 1, 2010 and until 23:59 hrs Thursday July 15, 2010, the daily limit is zero (0) chinook salmon.

The Department is continuing to implement the measures as outlined in Fishery Notice FN0092. The Department has been in consultation with representatives of the SFAB to develop new management measures to further protect Fraser River chinook populations as they move past the Victoria area.

> Effective 00:01 hrs Saturday May 22, 2010 and until further notice the daily limit is two (2) chinook salmon per day which may be wild or hatchery marked between the size limit of 45 cm and 67 cm of hatchery marked only chinook over 67 cm in length. These restrictions on chinook salmon will be in effect in Subareas 19-1 to 19-4 and Subarea 20-5 (those waters near Victoria between Cadboro Pt. and Sheringham Pt.).

Further to FN0092 and FN0352, the Department has been in consultation with representatives of the SFAB to develop additional management measures to protect Fraser River spring chinook populations as they pass through the Strait of Juan de Fuca to the Fraser River during June and early July. In Subareas 19-1 to 19-4, and 20-5:

> Effective 00:01 hrs June3, 2010 until 23:59 hrs June 18, 201 the daily limit is two (2) chinook salmon per day which may be wild or hatchery marked between 45 cm and 67 cm or hatchery marked only chinook over 67 cm in length.
> Then,
> Effective 00:01 hrs June 19, 2010 until 23:59 hrs July 15, 2010 the daily limit is two (2) chinook per day of which one (1) chinook may be greater than 67 cm. The minimum size limit in these areas is 45 cm.

Subareas 18-1 to 18-6, 18-9, 18-11, 19-5, and a portion of 29-4 and 29-5 that lies south from a point on the east side of Valdes Island located at 49° 5.562' N / 123° 39.989 W then extending 57° true north for 5 nautical miles to a point at 49° 8.316' N / 123° 33.669 W.

Effective 00:01 hrs June 3, 2010 until 23:59 hrs July 15, 2010 the daily limit is two (2) chinook salmon per day of which one (1) chinook may be greater than 67 cm. The minimum size limit in these areas is 62 cm.

Further to FN0387, the Department has been in consultations with representatives of the SFAB to develop additional management measures in 19-6 to protect Fraser River spring chinook populations as they pass through the Strait of Juan de Fuca to the Fraser River during June and early July.

Effective immediately until 23:59 hrs July 15, 2010 the daily limit is two (2) chinook salmon per day of which one (1) chinook may be greater than 67 cm. The minimum size limit in these areas is 62 cm.

Further to FN0440 the in-season prediction of chinook returns to the Fraser River ranges from approximately 56,000 to 67,000. Given the uncertainty about the in-season estimated return to the Fraser River, the Department plans to implement management actions consistent with zone 2 after July 15, 2010. Specific management actions announced previously to protect Fraser spring 4-2 chinook (see FN0346 and FN0347) will remain in effect until July 15, 2010 when greater than 70% of the spring 4-2 chinook run has entered the Fraser.

Effective at 00:01 hrs Friday July 16, 2010 and until 23:59 hrs Thursday July 29, 2010, in Subareas 29-6, 29-7, 29-9 to 29-10, the daily limit for wild or hatchery marked chinook salmon is two (2) per day of with a minimum length of 62 cm and a maximum length of 77 cm.

Effective 00:01 hrs Friday July 30, 2010 and until 23:59 hrs Friday December 31, 2010, in Subareas 29-6, 29-7, 29-9 to 29-10, the daily limit for wild or hatchery marked chinook salmon is two (2) per day with a minimum length of 62 cm.

At the request of local anglers and review by DFO stock assessment, Subarea 13-22 commonly known and described as those waters of Bute Inlet lying northerly inside of a line running from a marker at Alpha bluff to a marker on the opposite shore to the RCA boundary at the head of Bute Inlet will remain open to the retention of chinook for an additional month in May. This opening extension is predicated on fishers participating in the DFO logbook program. Subarea 13-22 will revert to the non-retention of chinook effective 00:01 hrs June 1, 2010 to 23:59 hrs September 30, 2010.

The following is a description of conservation measures which are implemented annually to protect Georgia Strait chinook. Also listed are those areas that have chinook nonretention areas to protect local stocks:

Area 14

Effective January 1 to December 31 there is non-retention of chinook salmon in Subareas 14-14 [Comox Harbour].

Effective May 1 to August 31 there is non-retention of chinook salmon in Subarea 14-11. [Baynes Sound inside a line from the Cape Lazo Light, then to the P-54 Bell Buoy on Comox Bar, then to Longbeak Point, then to the mouth of Hart (Washer) Creek].

Effective June 1 to June 30 in Subarea 14-3 there is non-retention of chinook salmon in those waters, inside a line from 49 46.74'N and 124 59.06'W near the boat launch at Kitty Coleman Provincial Park, thence north-easterly to 49 47.35'N and 124 57.68'W, thence southerly to 49 45.14'N and 124 54.32'W, thence southwest to the navigation light at the Little River Ferry Dock. Also included in the closure are those waters of Sentry Shoals within a 1.50Nm radius of the Sentry Shoal Marker Buoy.

Effective June 15 to August 15 there is non-retention of chinook salmon in those waters of Lambert channel bounded from a marker off Nile Creek, north along Vancouver shoreline to Mapleguard Point, thence along the Harbour limit boundary to southern point of Chrome Island, then to southern tip of Denman Island, thence north along shore to Whalebone Point, thence to Shingle Spit on Hornby Island, thence along the shore to Norman Point, thence south from Norman Point 2.4Nm to a position (49 28.25'N and 124 36.54'W), and back to Nile Creek marker.

Area 15

Effective January 1 to September 30 there is non-retention of chinook salmon in Subarea 15-6 [Toba Inlet] those waters easterly of a line from Snout Point to a boundary sign on the opposite shore.

Effective June 15 to August 15 there is non-retention of chinook salmon in the those waters of Algerine and Shearwater Passages bounded by a line from the southern most point of Harwood Island southerly to the navigational light on Rebecca Rocks hence northwest to the easterly most point to Vivian Island then northerly to the navigational marker at Mystery Reef hence west to the navigational marker on Atrevida Reef then southerly to the northern most point of Harwood Island then hence along the western shore of Harwood Island back to the point of commencement at the most southerly tip of Harwood Island.

Area 17

Effective August 1 to October 15 there is non-retention of chinook salmon in Subarea 17-4, except for those waters southeasterly of a line from Shingle Point to Pilkey Point and Subareas 17-5 to 17-7, 17-9, 17-13 to 17-17,[Northumberland Channel, Pylades Channel, Stuart Channel], thence a portion of Subarea 17-12 inside a line from Tinson Point to Snake Island Light (RCA Boundary) to the southern Five Finger Island group to the RCA boundary starting Horswell Channel Buoy (49 12.93N, 123 56.03W) to north of Horswell Bluff (49 12.93N, 123 56.47W).

Effective August 1 to October 15 there is non-retention of chinook salmon in Subareas 17-18 to 17-20 and a portion of 17-12 those waters inside a line from Icarus Point on Vancouver Island true north 2 nm, thence northwesterly to the Navy buoy in Ballenas Channel, thence to Nankivell Point at the entrance to Schooner Cove on Vancouver Island.

Area 18

Effective August 1 to October 15 there is non-retention of chinook salmon in Subareas 18-6, 18-8, and18-10 (Fulford Harbour, Satellite Channel, Shute Passage, Sansum Narrows).

Effective August 1 to October 15 there is non-retention of chinook salmon in that portion of Subarea 18-7 that lies northerly of a line from a square white boundary sign on Vancouver Island, near 48°46.179'N and 123°34.654'W, to a square white boundary sign on Saltspring Island SE of Burial Islet, near 48°45.992'N and 123°33.777'W, and southerly of a line from a square white boundary sign on Saltspring Island approximately 1.5 nautical miles ESE of Musgrave Point, near 48°43.982'N and 123°31.418'W, to a square white boundary sign on Vancouver Island approximately 0.5 nautical miles NW of Cherry Point, near 48°43.197'N and 123°33.708'W.

Area 19

Effective August 1 to October 15 there is non-retention of chinook salmon in Subareas 19-7 to 19-10 (Saanich Inlet).

Area 20

Effective August 1 to October 15 there is non-retention of chinook salmon in Subareas 20-6 and 20-7 [Sooke Inlet, Sooke Harbour and Sooke Basin, northerly of a line from Muir Point to Possession Point].

The fall chinook returns to the Puntledge River are expected to exceed spawner requirements. The following local recreational fishery opportunity for chinook salmon is being provided:

Effective 00:01 hrs August 20, 2010 until 23:59 hrs December 31, 2010, in the following areas, the daily limit for recreationally caught chinook salmon is two (2) per day, minimum size limit of 62 cm:

- Subarea 14-11 (Baynes Sound inside a line from the Caper Lazo light, then to the P-54 Bell Buoy on Comox Bar, then to Longbeak Point, then to the mouth of Hart (Washer) Creek).

- **Sockeye:**

The current status of the Fraser River sockeye return provides for recreational sockeye retention opportunities in most Southern B.C. marine waters.

Effective 00:01 hrs Thursday August 5, 2010, until further notice, in those waters open to salmon fishing in the following areas, the daily limit for recreationally caught sockeye is four (4) per day:

- Areas 13 to 19, Area 20, area 28, and Area 29 (29-1 to 29-5).

The current status of the Fraser River sockeye return provides for recreational sockeye retention opportunities in portions of Area 29.

Effective 00:01 hrs Thursday August 5, 2010, until further notice, in Subareas 29-6, 29-7, 29-9, and 29-10 (known as "the banana") retention of sockeye is permitted with a daily limit of four (4) per day. Sockeye retention is not permitted in Subarea 29-8 (Boundary Bay).

With the abundance of sockeye present in the marine areas and in the Fraser River in 2010, the recreational fishery remained open until it closed at 23:59 hrs on December 31, 2010.

- **Pink:**

<u>Angling opportunities for pink salmon in Nanaimo Harbour Area 17</u>

Effective immediately until 23:59 hours September 30, 2010, the daily limit for pink salmon is four (4) per day with zero (0) retention for other species of salmon in the following areas:

- That portion of Nanaimo Harbour shoreward of a line from the end of the most southerly dock located at the Nanaimo Yacht Club (49°10.614'N 123°56.336'W) to the Pedestrian Fishing Pier (Crab Dock) located at Swy-a-lana Lagoon (49 10.264N 123 56.051W). Regulations for this area are for a single artificial fly with a single barbless hook (hook having a single point) with a 15mm or less hook to shank measurement. Anglers are strongly encouraged to use circle hooks.